The traditional home of the Sandalwood tree

...IT COMES FROM MYSORE

Obtained from selected Mysore heartwood, Genuine Mysore Sandalwood Oil, distilled at our Linden, N. J., plant, is the chosen standard of purest quality for leading Perfumers the world over.

The delightful effect imparted by genuine Mysore Sandalwood Oil cannot be satisfactorily duplicated by natural or synthetic material from any source other than authentic Santalum album linnae.

Sole Agents for the United States, W. J. BUSH & CO., Inc.
New York

GOVERNMENT OF MYSORE

Sole Agents for Canada, W. J. BUSH & CO. (Canada) Ltd.,
Montreal, Canada

"ye Oldeſte Eſſence Diſtill'rs"

W. J. BUSH & CO.

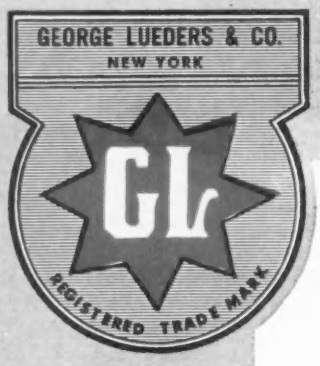
Incorporated

Essential Oils • Aromatic Chemicals • Natural Floral Products

11 EAST 38TH STREET, NEW YORK 16, N. Y. • Linden, N. J.

NATIONAL CITY, CALIFORNIA • LONDON MITCHAM • WIDNES

Published monthly by Robbins Publishing Company, Inc. Publication office, Chestnut & 56th Sts., Philadelphia 39, Pa. Editorial and Executive Offices: 9 East 38th St., New York 16, N. Y. Subscription rates: U.S.A. and possessions $3.00 one year; 30c per copy. Canada $3.00 one year; Foreign $5.00 one year. Volume 49, No. 5. Entered as second class matter December 29, 1938, at the Post Office at Philadelpha, Pa., under Act of March 3, 1879.



AMERICAN DISTILLED OILS

PRODUCED AT OUR BROOKLYN FACTORY

OILS

CLOVE	BALSAM PERU	OPOPONAX
NUTMEG	CELERY	PIMENTO
ORRIS LIQUID, CONC.		OLIBANUM
STYRAX		SANDALWOOD

also

LINALOOL	CITRAL	EUGENOL
	RHODINOL	

RESIN LIQUIDS

OLIBANUM	ORRIS	BALSAM PERU
LABDANUM		BALSAM TOLU
OPOPONAX	STYRAX	TONKA

Essential Oils • Aromatic Chemicals • Perfume Materials • Colors

GEORGE LUEDERS & CO

427 WASHINGTON STREET, NEW YORK 13, N.Y.

CHICAGO • SAN FRANCISCO • MONTREAL • ST. LOUIS • PHILADELPHIA • LOS ANGELES • TORONTO

ESTABLISHED 1885

HELFRICH

HEADQUARTERS FOR
ONE OR A COMPLETE LINE OF
QUALITY TIME TESTED
PRIVATE LABEL COSMETICS

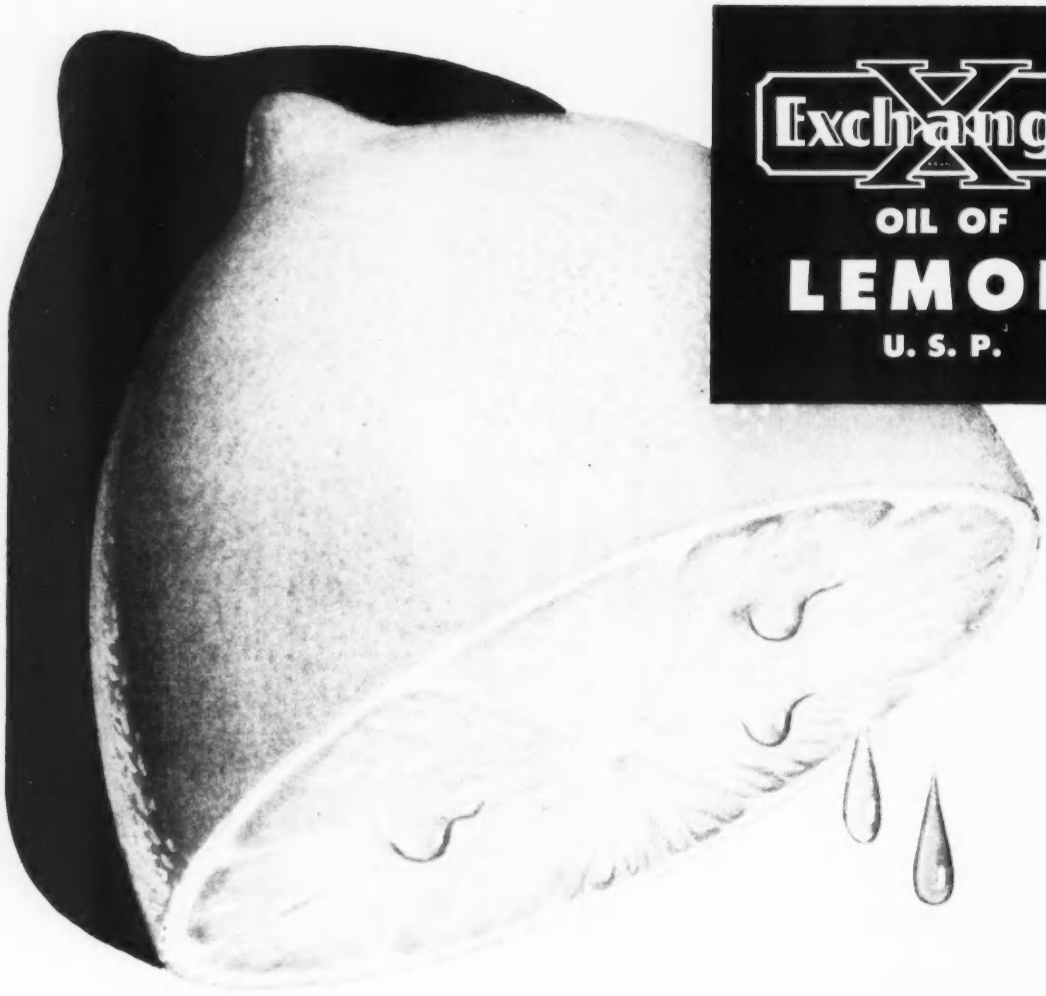
HELFRICH PRIVATE LABEL COSMETICS

Rouge	Cake Makeup
Cream Rouge	Mascaras
Lipsticks	Solid Perfumes
Eye Shadow	Cream Cologne
Face Powder	Face Creams
Sachets	Lotions
Etc.	Etc.

WHAT HELFRICH PROMISES . . . . . HELFRICH DOES

• HELFRICH LABORATORIES, INC., 737-9 W. JACKSON BLVD., CHICAGO • HELFRICH LABORATORIES OF CANADA, LTD., 690 KING ST., WEST, TORONTO, ONT.
• HELFRICH LABORATORIES OF N. Y., INC., 151-163 WEST 26th St., NEW YORK • CABLE ADDRESS: HELFLABS, NEW YORK . . . CHICAGO . . . TORONTO

HELFRICH Laboratories



LIKE THE FLAVOR OF A FRESH-CUT LEMON....

When it's *lemon* you want, Exchange is the Oil!

More than 80% of all the lemon oil used in the United States is Exchange Lemon Oil. This overwhelming endorsement by the trade is your assurance that Exchange Lemon Oil delivers *flavor . . . clarity* and *uniformity* not found in any other Lemon Oil.

Always specify it by the brand name when you order — Exchange Oil of Lemon. And to insure your satisfaction, accept no other brand.

Distributed in the United States exclusively by

DODGE & OLCOTT, INC.
180 Varick Street, New York 14, N. Y.

FRITZSCHE BROTHERS, INC.
76 Ninth Avenue, New York 11, N. Y.

Distributors for:
CALIFORNIA FRUIT GROWERS EXCHANGE
PRODUCTS DEPARTMENT, ONTARIO, CALIF.

Producing Plant:
EXCHANGE LEMON PRODUCTS CO., CORONA, CALIF.

Hibiscone

for Fixing, Blending, and Stabilizing Perfume

Hibiscone is of equal interest to the perfumer, the cosmetic technician, and the soap maker, to all of whom the completeness, stability, and the lasting quality of perfume is of prime importance. Its pleasing, persistent, and diffusive odor recalls that of natural Musk and Ambrette Seed. Its breadth of applicability together with other advantages, have placed it in a class by itself. A unique property is its lack of discoloration.

Descriptive matter and samples will gladly be sent upon request.

VAN DYK & COMPANY, Inc.

Belleville 9, New Jersey

LOS ANGELES 26 **1282 SUNSET BOULEVARD**

Emulsifiers

OF QUALITY AND UNIFORMITY

NOW READILY AVAILABLE

FOR SOAPLESS, NEUTRAL AND ACID EMULSIONS

TEGIN – Glyceryl Monostearate – Self emulsifying. For neutral greaseless creams, lotions and ointments.

TEGACID – Glyceryl Monostearate – Acid emulsifying. For greaseless anti-perspirant creams and ointments.

TEGIN P – Propylene Glycol Monostearate – Self emulsifying. For brushless shave creams, greaseless creams, lotions, ointments and cosmetic stockings.

TEGIN 515 – Glyceryl Monostearate – Non-emulsifying.

PRESERVATIVES *Esters of Parahydroxybenzoic Acid*

TEGOSEPT E TEGOSEPT M TEGOSEPT P BENZYL TEGOSEPT BUTYL TEGOSEPT

LANOLIN ABSORPTION BASES

PROTEGIN X—*For Nite Creams and Ointments.*

ISO-LAN—*For Creams, Lotions and Ointments.*

GOLDSCHMIDT

CHEMICAL CORPORATION

153 WAVERLY PLACE, NEW YORK 14, N. Y.

SALES REPRESENTATIVES

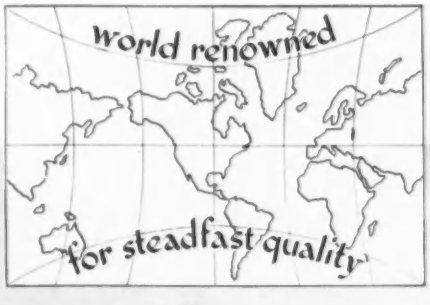
MONTREAL BOSTON LOS ANGELES CHICAGO ST. LOUIS TORONTO

schimmel

Heliocrete

A Schimmel Specialty

Four times as strong as Heliotropin and so much closer to the natural odor. An economical product, widely used, stable against alkali, effective as a fixative and without chemical odor.



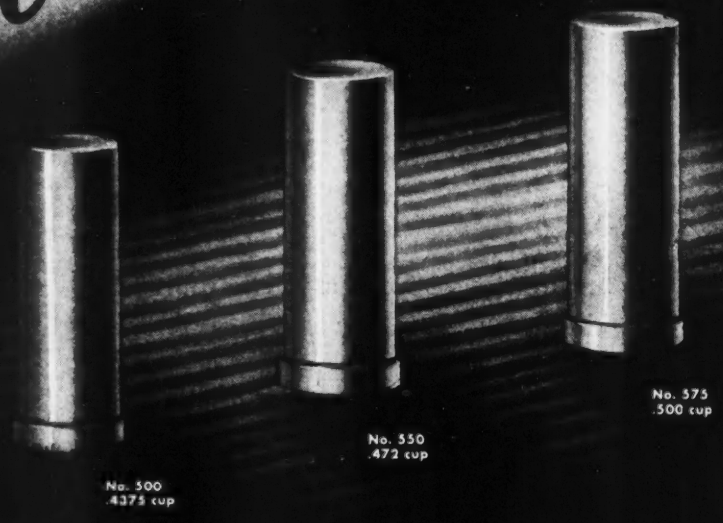
schimmel & co., inc.

601 West 26th Street, New York, 1, N. Y.

CHICAGO—CINCINNATI—ST. LOUIS—DALLAS—LOS ANGELES—SAN FRANCISCO

Rich Low BRASS

SWIVEL LIPSTICK CONTAINERS



"Fashioned Like Jewels"

THE ULTIMATE IN QUALITY

- De Luxe polished Rich Low brass — baked lacquer finish
- Free wheeling mechanism — It is impossible for the filler to swivel up while the cap is on
- "Click-Tite" closure*

PHONE, WIRE OR WRITE FOR SAMPLES

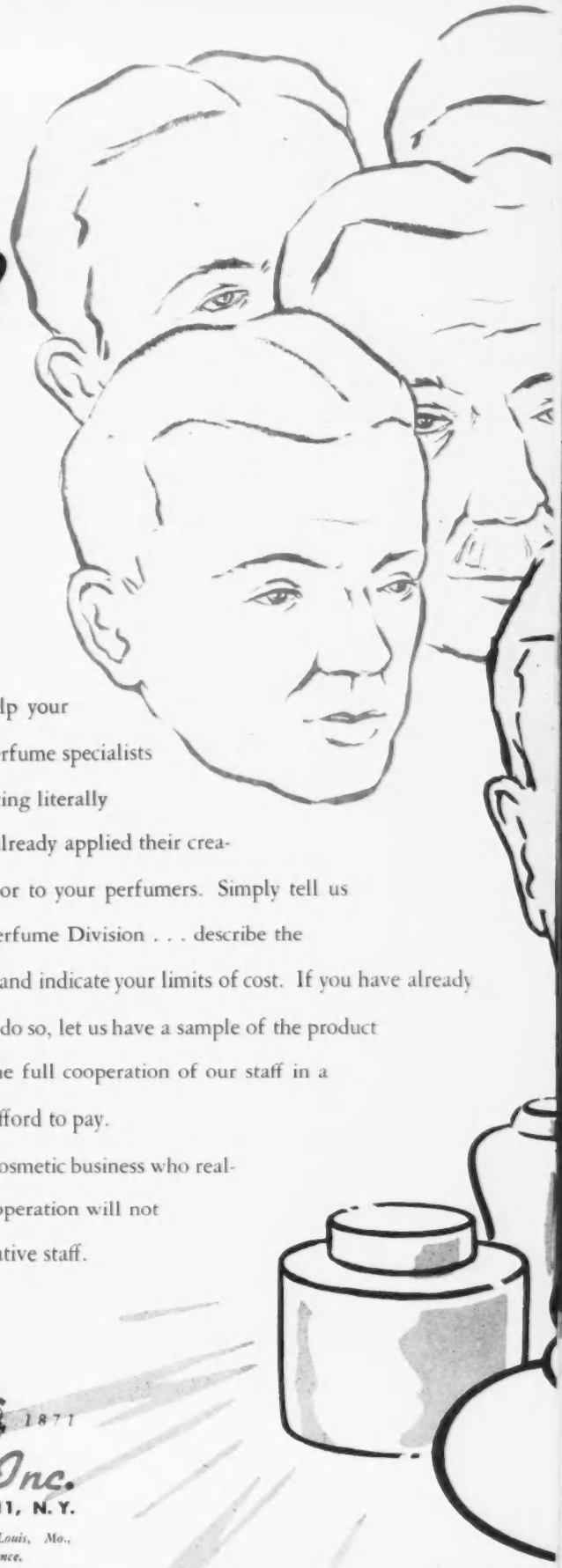
BRODER INDUSTRIES

INCORPORATED

167 WEST 64th STREET, NEW YORK 23, N. Y. • TRafalgar 7-0092

*Patents Pending

ARE ~~TWO~~ *many* MINDS BETTER THAN ONE?



OUR COUNTRY'S experience with atomic research suggests a most emphatic "YES"! Many minds, focused upon the same problem, invariably produce better results more quickly than a single mind working alone. Thus, whether you're building bombs or bouquets, your best approach is through group research.

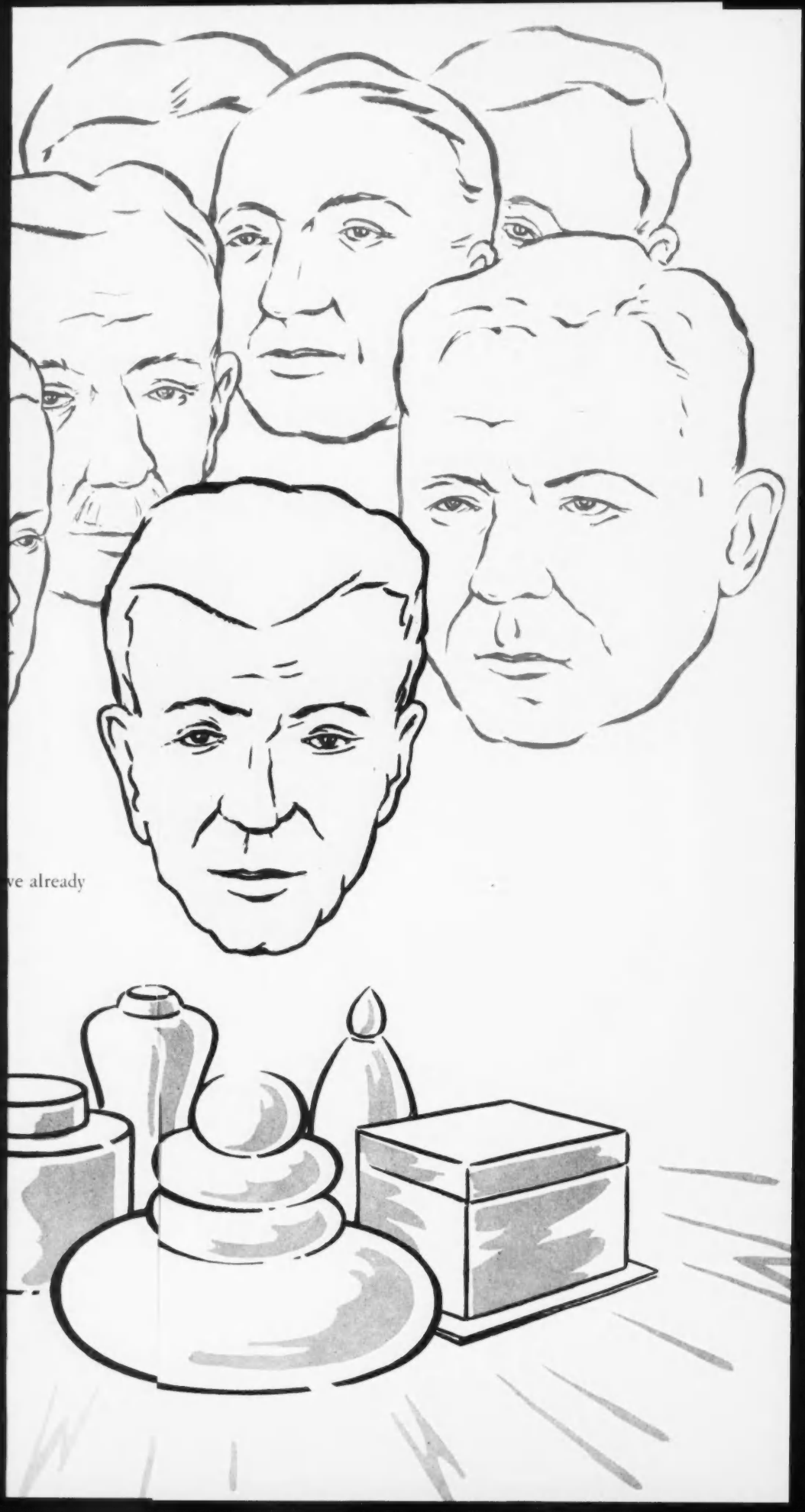
In our organization there are many minds ready and eager to help your perfumers with their compounding problems. What is more, our perfume specialists bring to every job they tackle a vast reservoir of experience embracing literally thousands of odor problems and applications to which they have already applied their creative talents. This wealth of experience is always available to you or to your perfumers. Simply tell us your problem—through letter or personal consultation with our Perfume Division . . . describe the end effect or odor type desired (if you have definite ideas in mind) and indicate your limits of cost. If you have already made some progress along the lines desired and can conveniently do so, let us have a sample of the product you have developed to date. From this point on you will enjoy the full cooperation of our staff in a sincere effort to produce exactly what you want at a price you can afford to pay.

In making this suggestion, we appeal to those in the perfume and cosmetic business who realize that many minds are better than one and who know that our cooperation will not only aid but greatly enlarge the accomplishments of their own creative staff.

FRITZSCHE *Established* 1871 *Brothers, Inc.*

PORT AUTHORITY BUILDING, 76 NINTH AVENUE, NEW YORK 11, N. Y.

BRANCH OFFICES *and* STOCKS: *Boston, Mass., Chicago, Ill., Los Angeles, Calif., St. Louis, Mo., Toronto, Canada and Mexico, D. F.* FACTORIES: *Clifton, N. J. and Seillans (Var), France.*



ve already

GOOD SENSE HELPS MAKE GOOD SCENTS...

A LOT of good, hard, common sense goes into the creation and production of any superior product. And that goes for a superior perfume, too. For that reason, we believe the suggestion offered on the foregoing page makes pretty good sense, especially now that a cautious public is thinking twice before it buys. After YOU have thought twice about our offer, we hope you will agree it is a good one . . . and will act accordingly.

PLEASE UNFOLD THE PAGE

"R" STANDS FOR ROSE...

. . . and ROSE stands for one of the perfumer's most useful flower oils. Employed to some extent in nearly every type of floral bouquet, its smooth, rich odor is particularly suited to the scenting of creams and powders where softness, delicacy and tenacity of fragrance are the perfume's most desirable attributes. . . . In offering the rose oils featured on the following page, we want to emphasize the fact that they are NOT imitations, but *genuine* rose extractions of most dependable origin Need we say more?

PLEASE TURN THE PAGE

FRITZSCHE BROTHERS, Inc.

ROSE USP XII KAZANLIK

EXTRA

THIS PRODUCT of the world-renowned Bulgarian distilleries has all of the attributes of a thoroughly fine rose oil—the purity, strength and beauty that lent distinction to the best pre-war grades of Otto of Rose. You'll find you can achieve better odor effects more economically with this powerful Bulgarian Oil. May we quote you and demonstrate its superiority?

ROSE

ROSE USP XII KAZANLIK

FARMER DISTILLATION

IN SPITE of the fact that this oil is the product of small farmer producers, it is, never-the-less, a very high grade of rose oil. Carefully bulked for uniformity, it is well adapted to general use in fine perfume and cosmetic work. It is somewhat lower priced than the "Extra" grade described above. We are well placed on both of these oils and would be glad to discuss the possibility of supplying your entire season's requirements.

. . . AND LAST BUT NOT LEAST

ROSE ABSOLUTE

SEILLANS

Now available — a material, unmatched for richness and tenacity of fragrance or for its range of application. This is your opportunity to acquire stock of one of the finest and most useful perfume raw materials.

FRITZSCHE *Established* 1871

Brothers, Inc.

PORT AUTHORITY BUILDING, 76 NINTH AVENUE, NEW YORK 11, N. Y.

BRANCH OFFICES *and* STOCKS: *Boston, Mass., Chicago, Ill., Los Angeles, Calif., St. Louis, Mo., Toronto, Canada and Mexico, D.F.* FACTORIES: *Clifton, N. J. and Seillans (Var), France.*

"That settles it!"

SHE BOUGHT YOUR PRODUCT BECAUSE SHE SAW IT ADVERTISED OR ITS ATTRACTIVE PACKAGE APPEALED TO HER. BUT IF, WHEN IT'S *USED*, IT HAS A WATERY, "SETTLED OUT" OR CURDLED APPEARANCE, YOU'RE OUT OF LUCK ON PROFITABLE REPEAT SALES

Many manufacturers, alert to this fact, are now improving their products with Kraystay. This remarkable vegetable stabilizer gives many products an *even* and *lasting* distribution of color and body.

Kraystay has unusual stabilizing, emulsifying and suspending effects. Used in a more concentrated solution, thickening or gelling can be accomplished. Kraystay is adaptable for use in cream lotions, hand lotions, toothpaste, cosmetics, pharmaceuticals, foods, and many other products of *medium* or *low* acidity.

Find out more about Kraystay. Call or write today, stating the nature of your product. Or, if you wish to submit your formula, Kraft technicians will be glad to assist you in the application of Kraystay to it. Kraft Foods Company, Dept. Y-13, 500 Peshtigo Court, Chicago 90, Illinois.

FROM TINY FRONDS OF CARRAGEEN *(edible Irish moss) gathered from the cold ocean floor, Kraft extracts a clear, pure vegetable gelose for use in the manufacture of Kraystay. Modern scientific laboratory control insures the uniform high quality of this consistently efficient stabilizer.*

A NEW DEVELOPMENT IN VEGETABLE STABILIZERS

Kraystay

MADE BY KRAFT

■ This impulsive lady buys ¾ of all goods sold at retail. She decides *what brand* at the point-of-sale. There—it's up to your *package!*

Conversion—1947 style

LEADING MERCHANDISERS are alert to changing conditions. They know that with increasing competition for shelf and counter display—with the rapid growth of self-service retailing and "impulse buying"—*selling at the point-of-sale* TODAY has become increasingly a function of the package.

They call upon Ritchie to produce *standout* packages that attract consumers, arouse interest, and give a quick, convincing impression of product quality.

They call upon Ritchie to produce millions of such packages *on time—at low unit cost!* And *in this* Ritchie does not fail them.

Ritchie has worked 31 years, developing the "know how," the specialized facilities and trained personnel that meet these requirements.

WAY TO INCREASED SALES. Let Ritchie help you develop a package that meets the increasing challenge of self-service retailing. A practical, production-planned package that instantly identifies, fully protects and conveniently dispenses your product. Easy to fill or pack—to handle, to stack or display—but above all an attractive, SELLING package.

A good product. Strong advertising. An effective package . . .
The Eversharp C. A. Pen package—by Ritchie.

Never Underestimate the Power of the Package!

COPYRIGHT, W. C. RITCHIE & CO.

W.C. Ritchie and COMPANY
8375 Baltimore Avenue • Chicago 17
★ SET-UP PAPER BOXES
★ FIBRE CANS
★ TRANSPARENT PACKAGES

NEW YORK • DETROIT • LOS ANGELES • ST. LOUIS • MINNEAPOLIS • MILWAUKEE • PITTSBURGH
PORTLAND • SEATTLE • MIAMI

CREATORS OF *the Essence of Elegance*

NAUGATUCK AROMATICS

DIVISION OF UNITED STATES RUBBER COMPANY

254 FOURTH AVENUE, NEW YORK 10, N. Y. • 14 NORTH FRANKLIN ST., CHICAGO 6, ILL.

NAUGATUCK CHEMICALS, LTD., ELMIRA, ONTARIO, CANADA

Sole distributors for:

BRUNO COURT, S. A., Grasse, France • C. A. P. P., Casablanca, Morocco

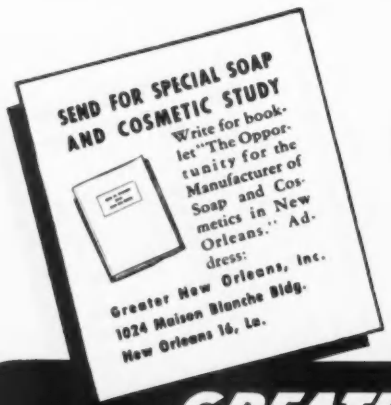
NEW PERFUMES AND FRAGRANCES COMPOUNDED FROM 605 SYNTHETIC AND NATURAL AROMATICS OF HIGHEST REFINEMENT FROM ALL OVER THE WORLD

NEW ORLEANS *WELCOMES*
The Soap & Cosmetic Industries

NEW ORLEANS IS A NATURAL FOR MARKETS, since its fine port offers easy access to the rich markets of Central and South America, Mexico and the Caribbean...since it is ideally located to serve the prosperous, expanding 10 southern states which combine 23% of the nation's population and much of the nation's buying power. Here are made-to-order markets—productive, profitable, expanding.

NEW ORLEANS IS A NATURAL FOR RESOURCES, with ample supplies of caustic soda, soda ash, salt, wood and gum naval stores and petroleum located only hours away. The leading domestic sources of tallow can be reached speedily and economically, and New Orleans is a leading port of entry for Latin American tallow. Other vital oils, such as fish, coconut and palm oils, are also brought in through the port of New Orleans, the nation's second largest—"first in efficiency."

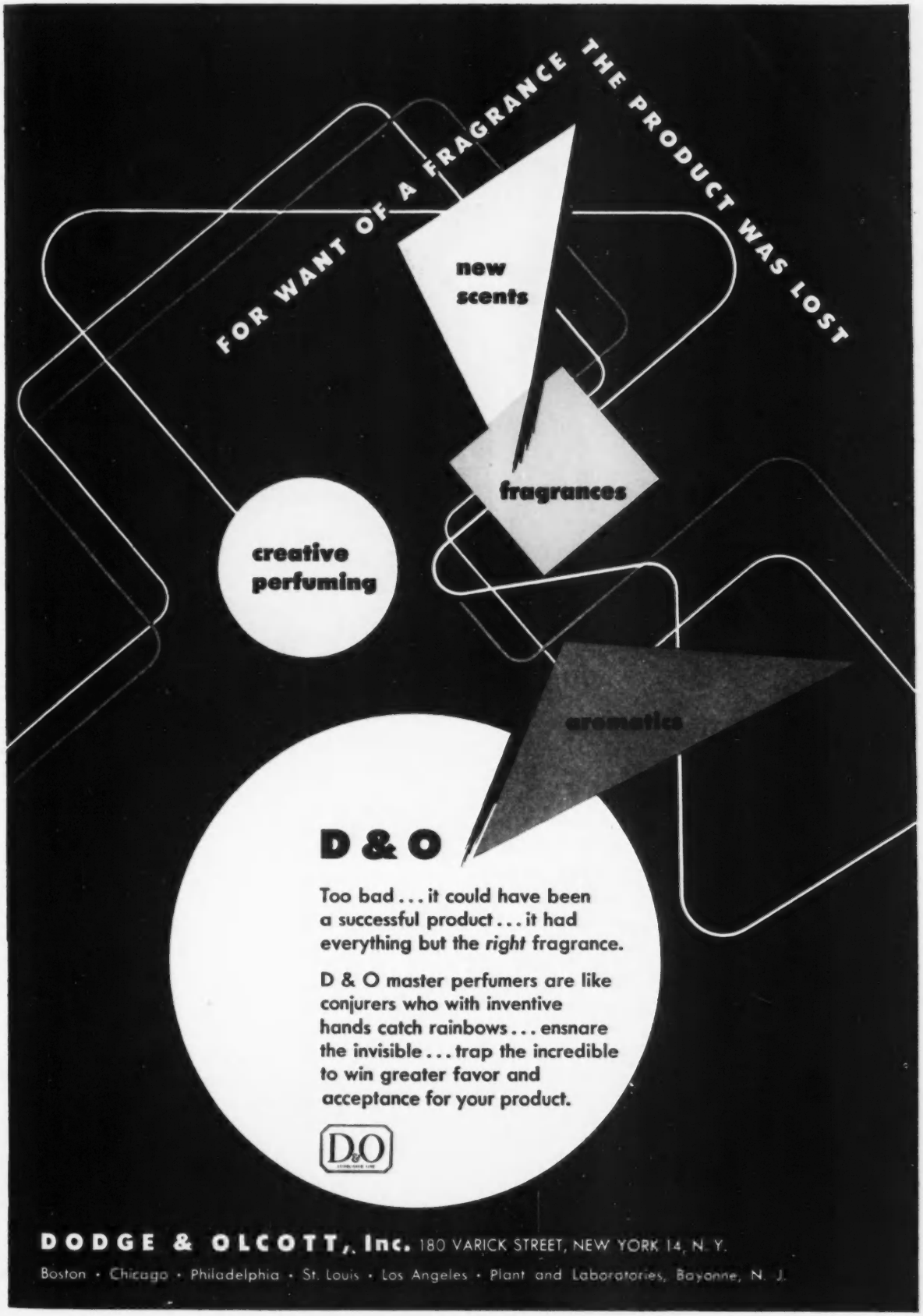
NEW ORLEANS IN A NATURAL FOR TRANSPORTATION, offering you the coordinated facilities of 97 ship and barge lines, 7 major airlines, 9 trunk railroads, streamlined highways and a 13,000 mile network of inland waterways. Yes, New Orleans is a natural for your plant located here. Investigate now.


SEND FOR SPECIAL SOAP AND COSMETIC STUDY
Write for booklet "The Opportunity for the Manufacturer of Soap and Cosmetics in New Orleans." Address:
Greater New Orleans, Inc.
1024 Maison Blanche Bldg.
New Orleans 16, La.

NEW ORLEANS IS A
Natural for Profits!

GREATER NEW ORLEANS

MARKETS TRANSPORT RESOURCES


FOR WANT OF A FRAGRANCE THE PRODUCT WAS LOST
new scents
fragrances
creative perfuming
aromatics
D & O
Too bad . . . it could have been a successful product . . . it had everything but the *right* fragrance.
D & O master perfumers are like conjurers who with inventive hands catch rainbows . . . ensnare the invisible . . . trap the incredible to win greater favor and acceptance for your product.
D&O
DODGE & OLCOTT, Inc. 180 VARICK STREET, NEW YORK 14, N. Y.
Boston • Chicago • Philadelphia • St. Louis • Los Angeles • Plant and Laboratories, Bayonne, N. J.

The Reward of Care

You'll find Carr-Lowrey machine made flint glass bottles ideal containers for products like hair shampoos and rinses. Their sparkling beauty is the result of specialized experience and skilled craftsmanship developed through close association with the cosmetic industry for over 58 years . . . the reward for manufacturing care that enables us to supply the finest perfume and cosmetic glassware.

CARR-LOWREY GLASS CO.

Factory and Main Office: BALTIMORE 3, MD. • *New York Office:* 500 FIFTH AVENUE (18) • *Chicago Office:* 1502 MERCHANDISE MART (54)

OPAL JARS • HANDMADE GLASS BOTTLES • MACHINE MADE FLINT GLASS BOTTLES

Quality Assurance in Cold Wave

LEADING manufacturers of Cold Wave solution are well content to pay a little more for Ammonium Thioglycollate by Summit. They look upon that slight differential as a very modest premium indeed to pay for assuring the quality of their product.

The high quality of Cold Wave solution based on Ammonium Thioglycollate by Summit is seen in the tighter and more lasting curl that is obtained. It is manifest in the stability of the solution and its freedom from unpleasant odors and discoloration. These factors reflect the high degree to which the purification of Ammonium Thioglycollate by Summit is carried—the "know how" with which the product is made—the rigid and unceasing scientific control exercised over each step in production. They are responsible for Summit being the largest producer of Ammonium Thioglycollate.

SUMMIT CHEMICAL PRODUCTS CORP.
Manufacturing Chemists
Belleville 9, New Jersey

Ammonium Thioglycollate

by SUMMIT

Quality---

what does that mean?

When we talk about the "quality" of SWINDELL bottles, the word means different things to different people. To some, it means beauty of design that lends glamor and lustre to your product.

To some, it means sturdiness and durability that insures you against undue shipping losses.

To some, it means dependability in delivery of uniformly good looking products.

But here's the point — whatever "quality in bottles" means to you, SWINDELL's hundred year tradition of skill makes certain that you get it here—in stock or private mould bottles, machine or hand made.

SWINDELL BROTHERS, Inc.

200 FIFTH AVE., NEW YORK ★ BALTIMORE 30, MARYLAND ★ ROBERTO ORTIZ • HAVANA, CUBA

Swindell

Jasmin Blossom "V"

BY ALBERT VERLEY & COMPANY

reaches new heights of beauty and fidelity

. . . in reproducing the aroma of this indispensable flower

—TURN THE PAGE

Jasmin Blossom "V"

BY ALBERT VERLEY & COMPANY

—your protection against the continuing high cost of natural Jasmin

Fortunately for the perfumer in this critical situation, the synthesis of this essential flower has achieved a constantly closer simulation of the original. For many years, the development of Jasmin specialties and compositions has been a particular interest of the staff of Albert Verley & Company. The climax of all this research and creative effort is reached in Jasmin Blossom "V." It is literally impossible to distinguish Jasmin Blossom "V" from the natural product, so nearly has perfection been achieved.

Its moderate cost makes Jasmin Blossom "V" widely available as a substitute, in whole or in part, for the natural product — both in your Jasmin odors and for the Jasmin note which is so important in a wide variety of other perfume compositions.

Important perfumers have found that Jasmin Blossom "V" is more than a war-time expedient. They have adopted it as a permanent part of their principal formulas. When you have experimented with a working sample, you will understand why. Write for yours today.

FOREIGN REPRESENTATIVES

Máximo A. Kuderli
Rodríquez Peña 233
Buenos Aires, Argentina

Blemco S. A.
Caixa Postal 2222
Rio de Janeiro, Brasil

Carlos Bobbert
Casilla 9660
Santiago, Chile

Agencia de Papeles y
Ferreterías Ltda.
Apartado Aéreo 4608
Bogotá, Colombia

Juan Gonzáles
Sitios 355
Habana Cuba

Sahdala & Co., C. por A.
P. O. Box #27
Santiago de los Caballeros
República Domínicana

H. G. Zevallos Menendes
Casilla 602
Guayaquil, Ecuador

Julio López Martínez
Apartado 229
Guatemala, C. A.

Alberto Farres
Apartado 7233
México, D. F., México

Manuel J. Riguero & Ciá. Ltda.
Managua, Nicaragua

La Química Suiza S. A.
Avenida Wilson 706
Lima, Perú

I. Oriol Escoda
Esq. Socarras
Caracas, Venezuela

Assem Beyhum
King Fouad Avenue
Beirut, Lebanon

Sapriel & Douek
16 Sheikh Hamza Street
Cairo, Egypt

I. Spitzglass & Sons
Queens Rd. & Norfolk Street
Woodstock
Cape Town, South Africa

Indian Chemical Works
Khurshed Building
Mahatma Gandhi Road
Karachi, India

CHICAGO, ILL. • NEW YORK, N. Y.
MEFFORD CHEMICAL CO., LOS ANGELES

Synthetic Aromatic Products and Organic Isolates • Synthetic Flower Oils and Aromatic Bases • Bouquets and Finished Compositions

Beauty without Disguise

ARLACEL EMULSIFIERS . . . *A new step to color-free perfection . . . to intensify product elegance for the chemist*

Why spoil the distinctive elegance of your product with an emulsifier that has to be masked? ARLACELS are the lightest-colored emulsifiers Atlas has ever developed—far less likely to intrude on the natural appearance of your formula than general-purpose emulsifiers. What's more, they have a clean, bland, pleasant odor that won't upset delicate perfume balance.

Especially developed for cosmetics, ARLACELS are non-ionic and make emulsions that are stable to freezing and to electrolytes. They are dispersible in water, soluble in most organic solvents, and almost universally compatible with materials to be emulsified.

There is nothing experimental about ARLACELS. Products of the same unending research that developed Atlas Spans and Tweens, they are ready *now* to make important improvements in your formulas for topical application. You are invited to write us for more details.

ATLAS

INDUSTRIAL CHEMICALS DEPARTMENT

CHEMICALS ATLAS EXPLOSIVES

ARLACEL—Span and Tween—Reg. U. S. Pat. Off.

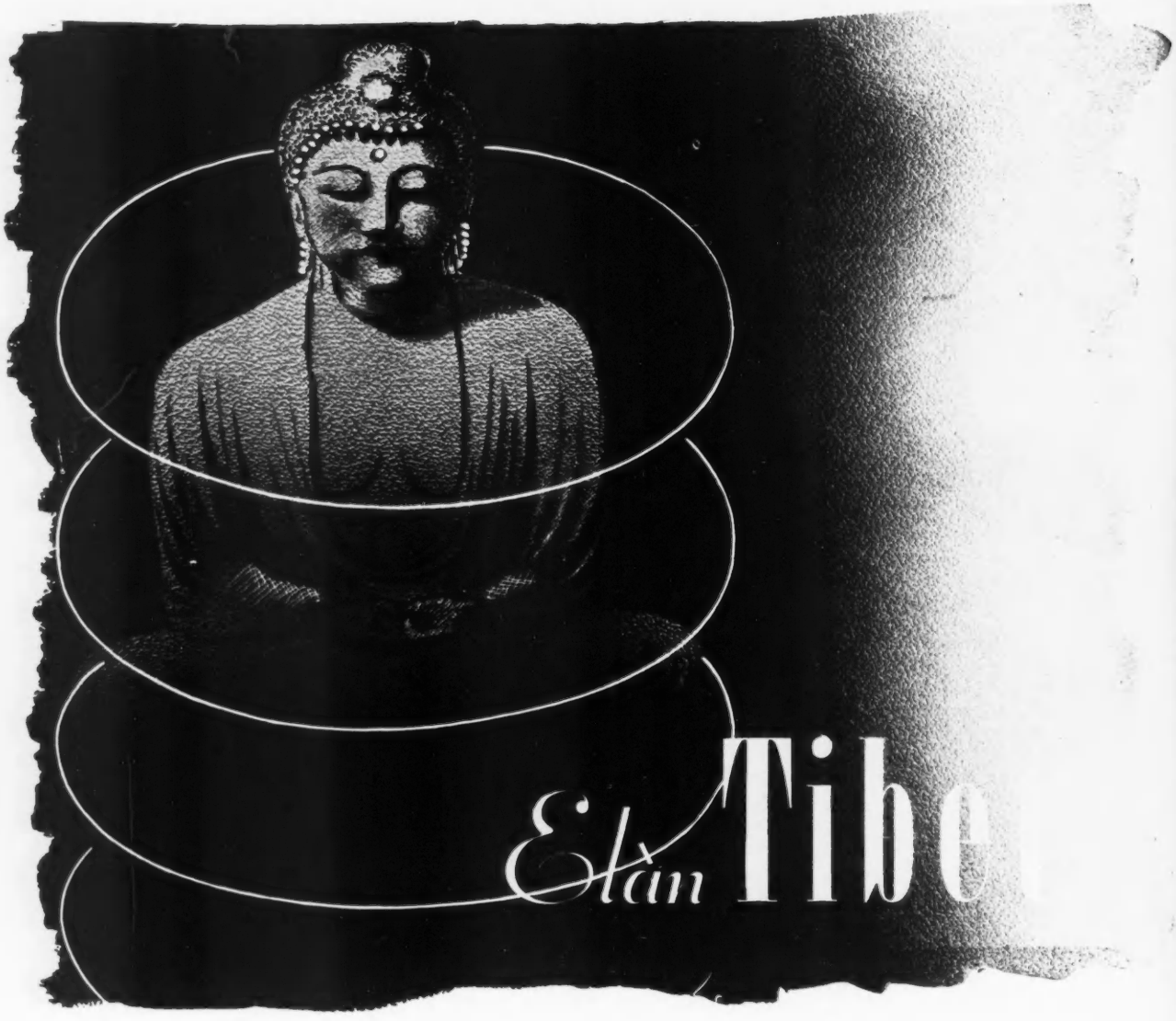
ATLAS POWDER COMPANY, WILMINGTON 99, DELAWARE • OFFICES IN PRINCIPAL CITIES • CABLE ADDRESS • ATPOWCO

perfume dreams come true

Your ideal can be achieved **ask vA-H**

Manufacturers of basic perfume materials

van AMERINGEN-HAEBLER, Inc.
315 Fourth Avenue, N. Y. 10



Floral creation of unusual intriguing odor...suggestive of the subtle charm and mystery of the native background with an appealing character that lends delicate bouquet to toilet waters and perfumes.

Samples upon request

Florasynth LABORATORIES INC.

CHICAGO 6 · **NEW YORK 61** · LOS ANGELES 13

DALLAS 1 · DETROIT 2 · MEMPHIS 1 · NEW ORLEANS 13 · ST. LOUIS 2 · SAN BERNARDINO · SAN FRANCISCO 11

Florasynth Labs. (Canada) Ltd.—Montreal · Toronto · Vancouver · Winnipeg

Florasynth Laboratories de Mexico S. A.—Mexico City

DECORATIVE STOPPER (Patented) formed of tiny, colored sea shells delicately shaped into form of a flower.

"THREAD-LOK" stopper-applicator, exclusive with Glass Industries, prevents leakage and evaporation. (Patented)

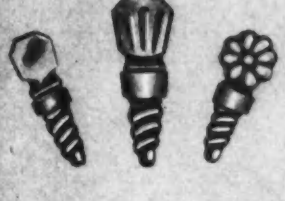
FLORAL DECORATION hand applied and deftly executed, adds beauty and distinction.

America's finest Miniature Bottles and Vials

Here are a few of what we consider to be the finest and most distinctive of America's miniature perfume bottles. Made entirely by hand by master glass blowers, they are available in many designs and in sizes from a few drops to 1 oz. Exclusive designs can be created and produced on special order. Write for catalogue today.

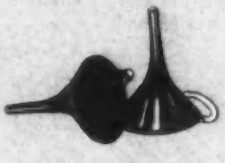
PATENTED SCREW STOPPER . . .

All Vials and Miniatures feature our exclusive, patented leak-proof, air-tight stopper-applicator.



INTERCHANGEABLE SCREW-STOPPERS

2 sizes available. This is our patented, exclusive leak-proof, air-tight stopper-applicator. They can be had in assorted colors, also "metallized" with gold or silver finish.

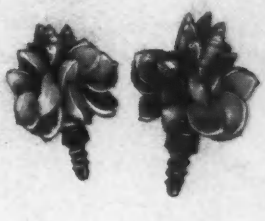


G.I.I. FUNNELS

These tiny funnels, available in crystal or colored glass, can actually be used for filling our vials and miniatures.

BOUQUET FLORAL STOPPERS (Patented)

Made of tiny hand-painted shells in beautiful pastel shades as shown above. Fit any style bottles.

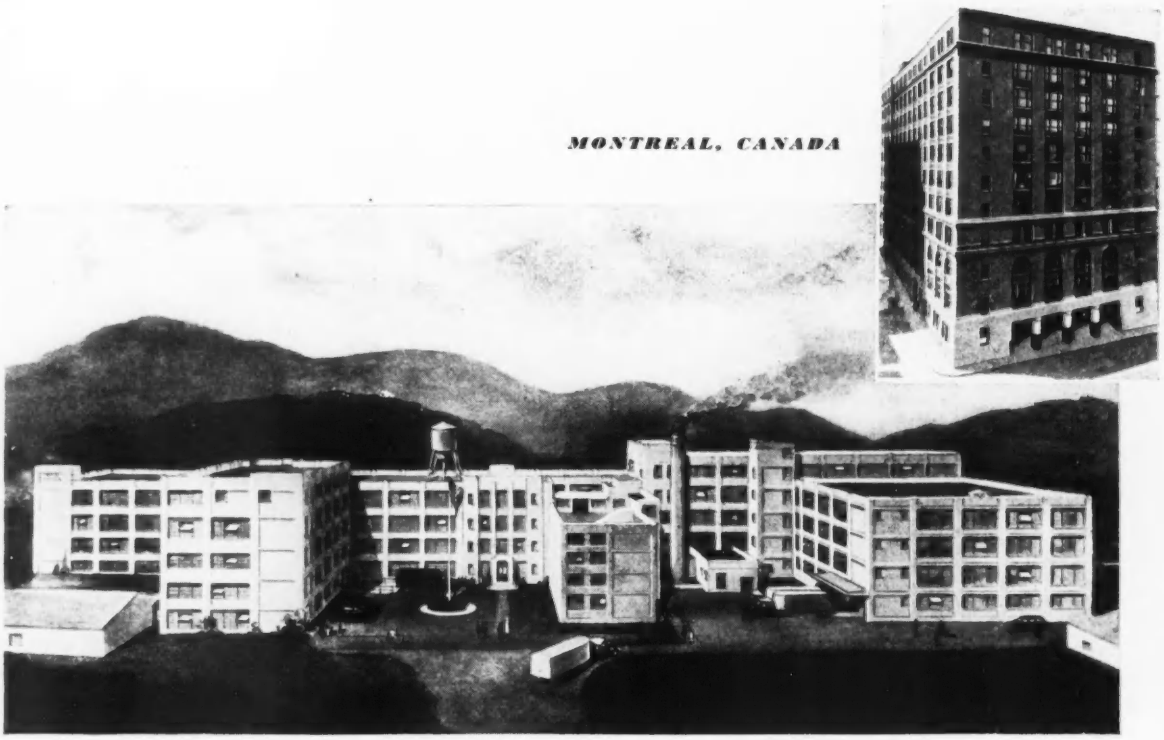


GLASS INDUSTRIES INCORPORATED

DESIGNERS
10 West 33rd Street

GI

MANUFACTURERS
New York 1, N. Y.



MONTREAL, CANADA

SUFFERN, N. Y.

objectives and perspectives

While we have been manufacturing Private Brand Cosmetics longer than most Companies, our contention is that it is not the age of a company, but the seasoned experience of its members that endows it with dependability.

Here, at Allied, you will encounter a compact organization of specialist-principals with a wealth of experience, geared to cog with the most modern scientific operations in the toiletries field. Yet, withal, an organization composed of men without poses... And who like to cook up things that aren't in a book ... a good test of skill and taste.

Always, we endeavor to incubate and inculcate merits that give a product EDGE... Sincerity and craftsmanship are the dual ideals which have foundationed our organization. When we assume the responsibility for manufacturing your product for distribution through broad trade channels... our reputation, too, is at stake.

Unlimited service to a limited number of clients has yielded excellent results. We have been most cautious in avoiding rapid expansion, knowing, full well, that mushrooming often produces toadstools.

These, in brief, are the objectives and perspectives to which we tenaciously adhere. And, we harbor the notion that your ship will come in provided you engage... the *right* skipper.

Avon Allied Products INC.

PRIVATE BRAND SPECIALISTS

30 ROCKEFELLER PLAZA, NEW YORK 20, N.Y.

New! *Specially Developed*
Perfume oils *for* Cream Shampoos

THE fragrance in your cream shampoo is an important factor in its popularity. The fragrance must be delicate, long-lasting and appeal to women of all ages and types. Our Perfumer-Chemists have prepared a new Crema Line of specially developed perfume oils for cream shampoos. These new oils blend perfectly with cream shampoos, impart a lasting fragrance and are available in 10 different odors, all of which have proved their consumer acceptance.

Send us a sample of your own cream shampoo. Our Perfumer-Chemists will be glad to suggest the Crema Perfume Oil which will give it greatest sales appeal. Or—if you wish to make your own experiments—we'll be glad to send you a sample of the fragrance you prefer.

• • •

The Crema Line of perfume oils for cream shampoos are available in the following fragrances:

CREMA ROSE • CREMA PINE • CREMA APPLE BLOSSOM • CREMA LAVENDER • CREMA GARDENIA
CREMA HONEYSUCKLE • CREMA JASMIN • CREMA EAU DE COLOGNE • CREMA CARNATION • CREMA BOUQUET

Aromatic Products Inc.

15 East 30th Street, New York 16, N. Y.

ATLANTA • CHICAGO • DALLAS • PITTSBURGH • MEMPHIS • SAN FRANCISCO • LOS ANGELES

KRANICH SOAPS

CONCENTRATED

LIQUID SOAP SHAMPOOS

(Coconut & Castile)

◇ ◇ ◇ ◇ ◇

POWDERED SOAPS

Pure Coconut
U.S.P. Castile

◇ ◇ ◇ ◇ ◇

POTASH SOAPS

Soft Potash 40%
U.S.P. XII Green

◇ ◇ ◇ ◇ ◇

Kranich Soap Company, Inc.

55 Richards Street **Brooklyn 31, N. Y.**

KRANICH SOAPS

a Bouquet to you!

Beauty . . . freshness . . . and intoxicating aroma . . . all the haunting loveliness of a florist shop—is made a lasting reality in the fragrances created by Compagnie Duval.

The true essence of the gardenia, lilac, jasmine, and the rose has been caught in every bouquet by the master-artists of the Duval perfume laboratories.

For the perfect complement for your own products...for the "lift" that will increase the sales appeal of your cosmetic line...we offer Duval floral bouquets that are breath-taking creations of authenticity . . . quality . . . and distinction.

Samples sent upon request

Compagnie Duval

DIVISION OF

S. B. PENICK & COMPANY

50 CHURCH STREET, NEW YORK 7, N. Y.
Telephone, COrtlandt 7-1970

735 WEST DIVISION STREET, CHICAGO 10, ILL.
Telephone, MOHawk 5651

PARASEPTS®

Neutral Esters of Parahydroxybenzoic Acid

Preservatives. **For products containing gums, mucilages, glue, carbohydrates, fats and oils, and other products subject to deterioration through mold growth, fungus formation, or yeast and bacterial action.**

Under certain conditions Parasepts can be used to provide antiseptic properties in lotions, creams, and powders.

Write to us for information on the application of Parasepts to your field of manufacture.

PARASEPTS AVAILABLE:

Methyl Parasept
Ethyl Parasept
Propyl Parasept
Butyl Parasept
Benzyl Parasept

SUPPLIED: 5-lb. cartons; 25-lb. and 100-lb. fiber drums.

HEYDEN CHEMICAL CORPORATION
393 Seventh Ave., — New York 1, N. Y.
CHICAGO OFFICE, 20 North Wacker Drive
PHILADELPHIA OFFICE, 1700 Walnut Street

the American Perfumer and ESSENTIAL OIL REVIEW

COSMETICS · SOAPS · FLAVORS

J. H. MOORE, President
HARLAND J. WRIGHT, Vice President and Editor
ROBIN FOWLER, Managing Editor
MAISON G. deNAVARRE, PH.C., B.S., Technical Editor
SHIRLEY BERG, Assistant Editor
MORRIS B. JACOBS, PH.D.
WILLIAM LAMBERT, Business Manager

CONTENTS · MAY 1947

Fluorine and Dental Caries
Dr. T. H. Rider 477
Rise of Revlon 481
Interesting New Woody-Type Odors
John R. Byers, Jr. 483
Cosmetic Trends in the Mid-West
Jean Mowat 485
Mineral Oil and Petrolatum
Milton J. Golden 487
L-B Hair Oil Company's Employee Benefit Plan 489
Packaging Portfolio 490
Properties of Thioglycolates
Dr. Carey P. McCord 492
Short Adages
R. O'Mattick 499
Preparation of Caramel
Dr. Morris B. Jacobs 501

REGULAR FEATURES

Desiderata—*Maison G. deNavarre* 473
Questions and Answers 475
Washington Panorama 509
Improving Production 513
Harold Hutchins Says 519
The Round Table 527
Market Report 539
Prices in the New York Market 541

THE ROMANCE OF INCENSES AND SPICES
Dr. Hugo Zahnd and Roslyn Sapinkopf 549

PACIFIC COAST REPRESENTATIVE: NED BRYDONE-JACK, 714 West Olympic Blvd., Los Angeles 15, California ... Western Office, Room 1328 Peoples Gas Bldg., Chicago 3, Ill.

SUBSCRIPTION RATES: U.S.A. and Possessions and Canada, $3.00 one year; 30 cents per copy. Foreign, $5.00 one year. Entered as second class matter, December 29, 1938, at the Post Office at Philadelphia, Pa., under act of March 3, 1879.

Published monthly by Robbins Publishing Company, Inc. Publication Office: 56th and Chestnut Sts., Philadelphia 39, Pa. Editorial & Executive Offices: 9 East 38th St., New York 16, N. Y. J. H. MOORE, President; F. C. KENDALL, Vice President and Treasurer; HARLAND J. WRIGHT, Vice President and General Manager; MARC MACCOLLUM, Vice President; R. R. ROUNDTREE, Circulation Director.

Robbins Publishing Company is publisher also of *Advertising & Selling, American Printer, Drycleaning Industries, Gas Age, Gas Appliance Merchandising, Industrial Gas, LP-Gas, Laundry Age, Laundryman.*

Cable Address: Robinpub, New York
Volume 49, Number 5 (*Copyright 1947, Robbins Publishing Co., Inc.*)

Editorial Comment

Prince Charming

There once was a man, and since this is a fable, it goes without saying that he was young and handsome. We shall call him Prince Charming. He found a way, during times of stress, of coming by a goodly number of bottles, some packaging materials, and other sundries, and went into the perfume business.

During the first year he made fifty thousand dollars; during the second, one hundred thousand; and during the third, two hundred and fifty thousand. Verily, this was a tangible substantiation of his business acumen and of his mental prowess . . . a matter which he had always suspected but had never before been able to bring to fruition.

And then there came a time when other young and handsome men, and young and lovely ladies, too, were able to come by a goodly number of bottles, and packaging materials, and other sundries, and sad to relate the fifty thousand, and the one hundred thousand, and the two hundred and fifty thousand were gone with the wind.

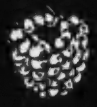
There has been much talk of late in the papers and the trade press of the lamentable state in which manufacturers of perfumes and cosmetics find themselves. A cross-section of conversations with manufacturers uncovers many plans. "We are going to add another salesman in our New England territory, just as soon as the situation clarifies itself." Or, "Last Fall we were planning on going into the West Coast in a big way, but now we're waiting on developments." Or, "We had planned a new advertising campaign."

Plans are all important to the operation of a company, but they never result in the merry jingle of the cash register unless someone DOES something by putting them into operation. It might have been all right to coast along during war-time when demand was there to soak up what appeared to be any amount of production, but not any more.

This is a great industry and the opportunities in it are unlimited but only for those who DO.

IT'S HARD TO TELL THE DIFFERENCE...

IMITATION STRAWBERRY NO. 21

IMITATION RASPBERRY  NO. 56

IMITATION CHERRY NO. 105

These skilfully blended Norda flavors embody the natural taste of freshly picked fruit, yet have the added advantage of concentrated strength ideal for stretching natural flavors. Any one of the three — Imitation Strawberry, Raspberry, or Cherry — merely by being used alone can completely replace your natural flavors. Excellent for hard and soft candies, gelatin desserts, etc.

Write for working samples and full details, on your company letterhead

Norda

ESSENTIAL OIL AND CHEMICAL COMPANY, INCORPORATED

NEW YORK OFFICE: 601 WEST 26th STREET • ST. PAUL: 904 LINDEKE BUILDING, ST. PAUL 1, MINN.
CHICAGO: 325 WEST HURON STREET • LOS ANGELES: 2800 EAST 11th STREET
HAVANA, CUBA: AMARGURA 160 • CANADA: 119 ADELAIDE STREET WEST, TORONTO

Desiderata

by MAISON G. DeNAVARRE

M. G. DeNavarre at work in his laboratory

MICROSCOPE

A cosmetic chemist without a microscope is like eggs without ham. Even so, many cosmetic laboratories carry on without microscopes because they feel that the instrument isn't used often enough to warrant the expenditure of several hundred dollars. Maybe that is a real point. Maybe not. Anyway, you can now buy a microscope with a 5-X and 10-X Huygenian eyepiece with a power ranging from 50 to 250 magnifications. And it is only $59 complete. If it weren't for the manufacturing economies learned during the war it wouldn't be possible. The instrument is rugged, tilts, and gives high clarity.

ALCOHOL SOLUBILITIES

One often hears the claim that small amounts of alcohol (less than 10 per cent) increase solubility of aromatic materials such as essential oils. Many of us have doubted that so little alcohol can do much solubilizing and to prove it now Large & Nicholson have published their findings using among other materials, camphor, creosote, eucalyptol, menthol, methyl salicylate and thymol. They find that 10 per cent alcohol has hardly any effect when compared to water. In other words, 10 per cent alcohol has just a bit more solubilizing effect than plain water. Thus to dissolve 1 part menthol it takes 2400 parts water or 2300 parts of 10 per cent alcohol, 1600 parts of 20 per cent alcohol and 700 parts of 30 per cent alcohol. Can you see how this fits in with the manufacture of, say, shaving lotion? Maybe you have been pouring a lot of menthol down the sewer if your shaving lotion didn't have the right alcohol percentage.

LIGHT COLORED ESTERS

Most everyone has used one of the mannitol or sorbitol esters, particularly the oleates. While the products produced during the past few years are pretty near to perfection insofar as color and odor are concerned, they can now be had in a *super purity* such as is demanded by exacting cosmetic chemists. The esters are almost odorless and colorless. Get samples and see if it isn't so.

EQUIPMENT FAULTS

It is always easier to criticize the other fellow than yourself. So here goes on one of my peeves. Not being either a natural or trained engineer, I have a heck of a time to figure out why a particular machine doesn't work . . . including my 1940 Chevy at times. Then I go to the manufacturer and tell him that the machine doesn't perform as it was said it would. The machinery maker gives me a lot of boloney about maybe this and maybe that and maybe I should get a bigger machine—one of his—but never does he admit that maybe the darn thing wasn't properly engineered in the first place. I often wonder how a machinery maker conceives his machine. Does he know what it is supposed to do: how it is supposed to do it; the variations between viscosities or consistencies of products made by different manufacturers and all the other things that should be considered? I don't know! They go through the motions of trying to know your specific need by requesting samples of the products "for observation and testing" then tell you that the machinery is O.K. Eventually you get it. And it isn't O.K.

This isn't always true, but it is true too many times. And if a consulting *chemist* runs into it as much as I do, I wonder how many times a consulting *engineer* like Dr. Franc Chilson runs into it. How about it Franc?

It promotes suspicion and distrust of equipment makers when it should promote friendliness and confidence. These stories are told of large and well known equipment boys as well as the younger and newer ones. How about a little self examination, mister equipment manufacturer?

STRAINING

Just saw some swell vinyon and styron filter and straining cloth. Both are tight as the dickens and should be swell for straining out large and many small particles in fluid products. I'm thinking of stuff like mucilages.

There is another gadget used as a steam trap that contains a fine wire meshed screen in it. The whole thing is made of stainless steel if so desired. Unfortunately the screen is only a 100 mesh, but no doubt it could be replaced by a finer one. This can be screwed in between tank and filler hopper and would be the last step in protection against foreign matter from getting into packaged

WHETHER IT'S SHOE CREAM or Shampoo—Tubes are the *Ideal Container!*

NO matter what the product may be, if it is of creamy or soft consistency, you'll find collapsible tubes are the *ideal* container. More and more products by increasing numbers of manufacturers are going to market in tubes. The consumer likes their light weight, compact sturdiness, ease of packing in anything from travelling bag, to handbag, to medicine chest. Manufacturers like their lightness and toughness which offer greater ease and economy in shipping, eliminating the breakage problem. When you specify tubes, make it a habit to "Specify *Sheffalloy*" (Sheffield Process) Tubes. A special method of melting, mixing and tempering the metals assures extra toughness . . an extra margin of safety. New England's craftsmanship is especially noteworthy, assuring fine uniform quality and outstanding tube decoration. You can save time and trouble by ordering tube cartons simultaneously with the tubes, from this one dependable source . . the only tube manufacturer offering this service to you. Don't delay. Write or wire our nearest office today for prices, samples, suggestions. No obligation, of course.

If your tube filling facilities are inadequate, ship us your bulk product. We'll package it for you in tubes, jars or tins, ready for distribution. This is only ONE of the EXTRA services available at NEW ENGLAND!

Sheffalloy TRADE MARK REGISTERED

SHEFFIELD PROCESS TUBES

NEW ENGLAND COLLAPSIBLE TUBE CO.

3132 S. CANAL ST., CHICAGO 16 • NEW LONDON, CONN. • W. K. SHEFFIELD, V. P., 500 FIFTH AVE., NEW YORK 18
T. C. SHEFFIELD, 7024 MELROSE AVE., LOS ANGELES 38 • C. W. MILLER, 151 COLE ST., SAN FRANCISCO 17
EXPORT DEPT: 500 FIFTH AVE., NEW YORK 18, CABLE "DENTIFRICE", NEW YORK

goods. The straining screen is replaceable so the connection really lasts a lifetime. Methinks the steam trap maker should look into this a bit further, for he has a big market in industries other than cosmetics if he wants it. The connection comes in all standard pipe sizes. Sounds good doesn't it?

SUNSCREEN EFFECTIVENESS

It has just been shown again that the vehicle for a sun screen makes a lot of difference as to whether the product will give the effectiveness expected or not. A particular screen had been checked numerous times in straight oils, and the percentage used was found to be sufficient. Yet when the same sun screen was made up into an emulsion, it *appeared* to have lost some of its effectiveness. Actually nothing was lost in the sense of chemical loss, although the skin did not get the protection expected. What apparently happened is that there was not enough oil in the product to slow up absorption, or, the emulsion was so fine it was readily absorbed and carried away from where it was needed, or perhaps the increased moisture content of the skin resulting from the application of a water emulsion requires more sun screen to do the job. Whatever it is, it is established that an emulsion of a sun screening agent should be some 10 to 20 per cent stronger in sun screen to compensate for the difference between effectiveness in straight oils as compared to emulsions.

QUESTIONS AND ANSWERS

646. HAIR STRAIGHTENER

Q: *As a subscriber to your very fine journal, I would like to ask: (1) for a formula for straightening colored people's hair. We have had this in mind for a long time, and the mentioning of the subject in the February 1946 issue by Maison G. de Navarre has brought it up again. (2) We have a skin lotion in which we use a small amount of salicylic acid. As we note that methyl salicylate is a part of the formula of a number of antiseptic lotions, we would like to ask if you think methyl salicylate would be better to use than salicylic acid.*

E. C.—ILLINOIS

A: Hair straighteners such as you require are usually nothing more than a combination of wax and petrolatum, occasionally with rosin made of such consistency as to be usable yet have definite adhesive properties. Try the following as a starter for your experiments: Ceresin 40 pounds, beeswax 10 pounds, rosin 40 pounds, petrolatum 100 pounds. Melt the ingredients together. Methyl salicylate has an entirely different action from salicylic acid. Salicylic acid in concentrations below about 5 per cent is keratoplastic, causing the horny layer of the skin to become thicker, according to Goodman. If the concentration is above 5 or 6 per cent, the horny layer is lifted off the skin. Of course, such action may be dangerous from the cosmetic point of view.

647. CLOUDING IN LOTIONS

Q: *In following some of the formulas given in deNavarre's "Chemistry and Manufacture of Cosmetics" I am having trouble with after shave lotions "clouding" when adding the water. Should the water be distilled? Your suggestions would be very much appreciated so that this cloudiness in the lotion may be corrected. The formula of alcohol that I am using is 39-B. (S. D. Alcohol). I note that this book did not include a formula for sachet powder. Can you recommend a good formula?*

J. M.—TENNESSEE

A: If you are having clouding of hydroalcoholic lotions of any kind, it is probably due to the fact that you are using the wrong perfume, insufficient alcohol or the wrong S. D. alcohol. In your case, it is probable that the diethyl phthalate denaturant is coming out of the solution. You should use S. D. 40 which is the one recommended for this purpose. Regarding a formula for sachet powder, we suggest that you use some highly powdered natural cellulose or wood flour, to which you can add from 2 to 5 per cent of perfume compound. The product may be tinted with either a spirit soluble color or by means of a color lake. The names of suppliers of sachet materials are sent to you under separate cover.

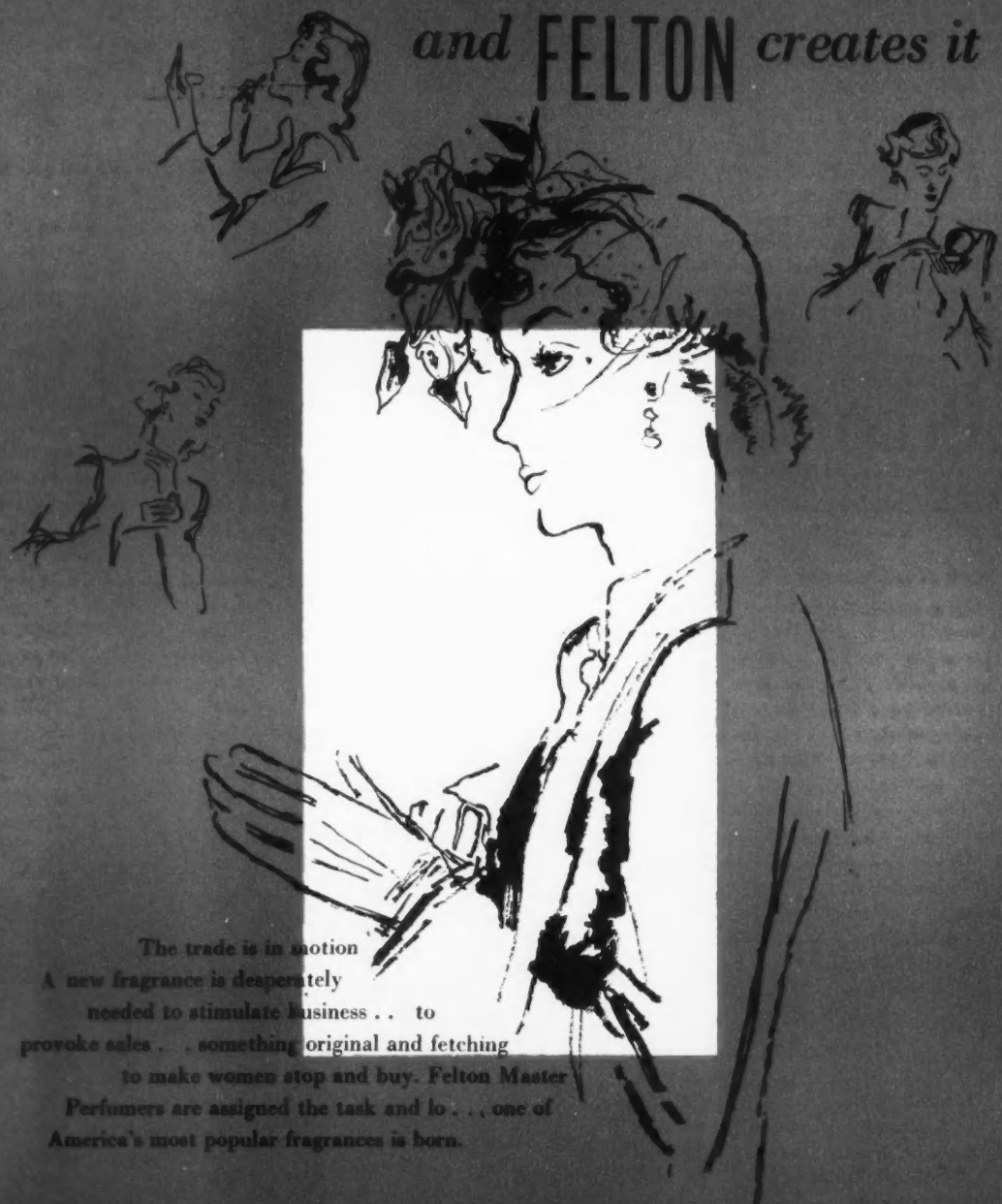
648. COLD WAVE SOLUTIONS

Q: *I am established as a beauty shop supplier in Athens for 15 years, and am desirous of introducing the cold wave process in Greece. Unfortunately, there is not any possibility of importing that specialty and maintaining a regular business. For this reason I would be much obliged if you could send me the necessary formulas for preparing the cold wave and neutralizer in our place. If, by the way, you judge that you are not in a position to furnish me with the above formulas yourself, please arrange that some suitable person undertakes this for me, and I am ready to remit immediately a certain fee if required. Also, I will be glad to take into consideration any good idea on this subject. Your answer by airmail will reach me 20-26 days from date of mailing.*

A. V.—GREECE

A: Unless you have a well equipped factory, it would be impossible for you to manufacture the chemicals required for the preparation of cold waving solutions and the neutralizers. It is true that the neutralizer may consist of vinegar and hydrogen peroxide, using 9 ounces of vinegar to 2 ounces of hydrogen peroxide. However, the cold waving solution itself consists essentially of a 6½ per cent solution of ammonium thioglycollate, brought to a pH of 9.5 by the use of ammonia water. If you are unable to buy ammonium thioglycollate in Greece, you can probably buy it from English suppliers and we give you the name of several of them under separate cover. We would not recommend that you attempt to manufacture ammonium thioglycollate because the process is hazardous and requires perfect control and a great deal of work.

Fashion decrees
a new fragrance
and FELTON *creates it*



The trade is in motion
A new fragrance is desperately
needed to stimulate business . . to
provoke sales . . something original and fetching
to make women stop and buy. Felton Master
Perfumers are assigned the task and lo . . . one of
America's most popular fragrances is born.

FELTON CHEMICAL CO., Inc. 599 JOHNSON AVENUE, BROOKLYN 6, N.Y

Branches in Boston, Dallas, Philadelphia, San Francisco, Los Angeles, Chicago, St. Louis, Montreal, Toronto, Vancouver, Winnipeg

MANUFACTURERS OF PERFUME OILS, AROMATIC CHEMICALS, ESSENTIAL OILS AND FLAVORS

Fluorine and Dental Caries

Opinion on the addition of fluoride to dentifrices ranges from the conviction that its use is dangerous, to the compulsory incorporation of fluoride

T. H. Rider*

ONE of the most fertile fields of dental research has been the study of the role played by fluorine in dental health. No brief summary can pretend to cover the field exhaustively.

FLUORINE IN TOOTH ENAMEL

The presence of fluorine in human tooth enamel was reported as early as 1805 by Gay-Lussac and Berthollet.[31] Crichton-Browne[20] in 1892 thought "it well worthy of consideration whether the reintroduction into our diet . . . of a supply of fluorine in some suitable natural form . . . might not do something to fortify the teeth . . ."

Such early references were, perhaps, prophetic, but cannot be credited as originating the current scientific consideration.

The current knowledge of the action of fluorine stems from a study of mottled tooth enamel, a disfiguring dental defect.

Recognition of fluorine as the agent in production of mottling of enamel sprang, in 1931, from the work of Churchill[17] and of Smith, Lantz and Smith.[52]

Later studies proved that mottled enamel is endemic in nature, and directly related to the concentration of fluorine in the drinking water consumed by children during tooth-formation years. Dean[22] has shown that fluorine at 1 ppm in the drinking water produces mottled enamel of the mildest form in about 10 per cent of children, while 4 ppm produces more definite mottling in 90 per cent of cases.

Black and McKay[11] had reported, as early as 1916, that the incidence of caries was less in mottled teeth than in normal teeth. Cox[18] was apparently the first, specifically, to suggest (in 1937) a beneficial role for fluorine in preventing caries. Within limits, there appears to be a distinct relationship between fluorosis and caries, and in areas of endemic fluorosis there is an inverse relationship, caries decreasing as fluorosis increases.

This evidence is supported by reports that the fluorine content of sound teeth is higher than that of carious teeth.[3]

Some contrary opinions have been expressed. Bunting in 1928 reported[13] his finding that the frequency of caries was the same although the extent and activity of caries was less in fluoride areas.

Applebaum in 1936 reported[2] that he found a lack of correlation between the severity of mottling and the number of carious areas.

M. C. Smith[53] warned that the favorable results might be misleading. Smith reported that in St. David, Arizona, where the drinking water contained from 1.6 to 4.0 ppm of fluorine, children of 12-14 years did show a definite reduction in caries but that residents aged 21-41 showed excessive caries.

Weaver[58] also stated that fluorine had a postponing action, but did not prevent caries, the delay not exceeding 5 years.

FLUORIDE ADDED TO DIET

In spite of the few contrary opinions, and in spite of possible dangers which will be discussed later, there have been numerous proposals to add fluoride intentionally to the diet (usually to the drinking water) in order to reduce caries.

Tests are at present being conducted in Evanston, Illinois, Grand Rapids, Michigan, and Newburgh, New York, in which fluorine is being purposely added in low concentration to the drinking water of these test towns, while neighboring control towns are continuing to use fluoride-free water. The results of these tests, over a sufficiently long period, should be convincing.

* Technical Director, Pepsodent Division, Lever Brothers Co.

Such results presumably cannot be entirely conclusive, however, until continued for the entire life span of the generation born after the experiments started.

The earlier studies, both on animals and on humans, indicated that the caries-inhibiting and fluorosis producing action of fluoride-containing drinking water were both found when the water was consumed during the tooth formative age.[1] It was naturally assumed that the tooth enamel contained fluorine, which, as a result, and depending upon the amount of fluorine laid down in the enamel, showed an increased caries resistance and fluorosis or mottling.

Continued observation has indicated that the consumption of fluorine containing water may still have a caries inhibiting effect on fully erupted teeth.[25, 39]

Since it is unlikely that ingested fluorine can be deposited by metabolic processes in the enamel of erupted teeth, these observations have suggested that fluorine may find its way directly from drinking water into the tooth structure.

Volker, in 1939, showed[56] that tooth enamel would pick up fluoride on contact with fluoride solution.

TOPICAL APPLICATION OF FLUORIDE SOLUTIONS

There have been numerous reports of the use of fluoride solutions by topical application, recognized by a recent editorial in the Journal of the American Dental Association[1] which recognizes the probable effectiveness of such procedure but warns of potential dangers.

Armstrong was reported in a newspaper article in November, 1940 as believing that topical application of fluoride would prevent caries.

Bibby[10] reports on a new technique by which dental prophylaxis is conducted with 1 per cent NaF, H_2O_2 and pumice, and he claims that two prophylaxes will reduce caries by 25 per cent while three prophylaxes will reduce caries by 43 per cent.

Cheyne[15, 16] found that topical application of solutions of from 500 to 60,000ppm of fluorine were useful in reducing carious activity in existing lesions and decreased the formation of new lesions.

Jordan[38] and Knutson[40, 41, 42] reported that a solution of 2 per cent NaF, applied topically, would prevent new carious areas, but would not stop the carious process if previously initiated.

An editorial in the British Medical Journal[29] and a review by Hodge[34] both acknowledge the effectiveness of topical application, while further work by several other workers verifies the effectiveness of local application.

These results all lead to a conclusion that the topical application of fluoride has some action in preventing caries. This conclusion cannot be recorded at this point, however, without adding that in the writer's opinion, all the positive evidence indicates that repeated applications of preparations of very high fluoride content are required, and that there is, as yet, no convincing evidence that any significant value can be expected from the addition of reasonably low fluoride concentrations to dentifrices.

Before entering upon a further discussion of the mechanism of fluoride action it is necessary to outline, as a working hypothesis, a mechanism of caries itself.

Caries is regarded as a condition attacking the tooth from an outside surface.

The original attack of caries upon tooth structure is regarded by many as a simple chemical attack by acids. In order for the acids to produce the typical localized attack it is assumed that they form, and are concentrated within a dental plaque—an adhering, discrete surface deposit or a food particle wedged into a narrow space such as a crevice or an interproximal space, which holds the acids in situ in spite of rinsing of the surface by water or saliva.

The acids are presumably formed by living organisms acting within the plaque or particle on carbohydrates originating in foods.

The organisms are acidogenic in nature and comprise one or more of the group of Bacillus acidolphilus, acidogenic Streptococci, yeasts and molds.

The carbohydrate substitute is typified by sugar, but other substances may also be involved.

The reactions leading to carious attack can be represented as requiring *all* of the following contributing factors:

1. Fermentable carbohydrate.
2. Acidogenic organism.
3. Plaque or static particle.
4. Susceptible tooth surface.

Thus, if the chain of reactions were *completely* broken at any one point, caries could be prevented. It is practically impossible, of course, completely to avoid any one of the four contributing factors. There is, however, tenable evidence that caries can be reduced by at least four methods:

1. Reducing fermentable carbohydrate in diet.
2. Reducing the organisms in the mouth, as by the use of germicidal agents or other agents inhibiting the fermenting reaction.
3. Cleaning the teeth thoroughly to remove all food particles or plaques.
4. Increasing the resistance of the tooth surface to acid attack.

Atkins,[6] Dean,[24] Jay[36, 37] and Miller[49] have reported that fluorine action is associated with low oral bacterial counts.

Lipman[44] has stated that low concentrations of fluorine do interfere with fermentation of carbohydrate and Bibby[7] has found that fluorine in concentration of less than 1 ppm reduces acid production by acidogenic bacteria. Atkins,[6] Hodge[33] and McClure[47] have suggested that fluorine may decrease caries by interfering with the acidogenic process.

Insofar as fluorine may act within the mouth rather than by becoming an integral part of the tooth structure, its action could have little claim to specificity or natural physiological significance. Many other substances have been shown to influence caries by such action in the oral cavity, including penicillin, vitamin K oxalate, ammonia, iodoacetic acid, and various germicides.

The deposition of fluorine in tooth structure by the preeruptive consumption of fluoride-containing water can be accepted as fully established. Evidence that this is the important mechanism of fluoride caries prevention, has been offered by Armstrong,[4] Cox,[18] Dean[23] and Irving.[35]

Of course, many workers who have claimed results from the post-eruptive topical application visualize the mechanism as absorption of fluorine by the tooth.

The effect of fluorine in increasing the caries resistance of teeth appears to most workers to be accomplished by means of increasing the resistance of such enamel to attack by acids.

Thus it has been reported that the enamel of fluorosed teeth is less acid soluble than that of normal teeth.[33, 36]

The treatment of ground enamel by topical application of fluoride reduces its solubility in acids.[8, 9, 14]

TOXIC EFFECTS OF FLUORINE USE

There are many warnings in the literature that there are possible toxic or harmful results from the use of fluorine. An editorial in the Journal of the American Dental Association[27] stated in 1940 "Although it has been fairly well established that fluorine has a slightly retarding influence on the progress of dental caries . . . (the) deleterious influence . . . is too serious to be counterbalanced by questionable caries retarding influence."

On the other hand, Cox and Levin[19] in 1942 stated "We believe that when all of the facts are known, the toxic effects of fluorine will be far outweighed by the beneficial effects in the prevention of dental caries."

These two contrary opinions cannot, today, be evaluated, since all of the facts are not yet known.

It can be argued with considerable justification that public health control of the fluorine in drinking water can achieve a desirable fluorine level by adding fluorine up to 1 ppm or by removing excess fluorine to this level. The safety of this procedure is not our immediate concern, although Arnim,[5] Box[12] and Dean[22] did report that even at the low 1 ppm fluorine level there was some mild mottling.

Phillips and Lamb[51] found that fluoride consumption by rats produced pathologic changes in kidneys, testes and thyroid.

Wilson[60] reports that there appears to be a relationship, geographically, between endemic fluorosis and endemic goitre.

Morgareidge[50] found that fluorine interfered with the Vitamin D healing of rat rickets.

The systemic toxicity of fluorine has been reviewed by Machle and his associates,[45, 46] who found some fluorine in the urine of people living in areas with fluorine-free water. They also report that fluorine ingested at low levels appears to be completely excreted in urine and feces, while at higher levels there is retention.

McClure[48] has reasoned that since fluorine is excreted, its toxicity may not be as great as would have been expected.

R. R. Smith[54] reports that twice the usual fatal dose of fluorine can be fed to guinea pigs if calcium carbonate or magnesium oxide are also administered. Smith reasons, therefore, that the inclusion of fluorine in a dentifrice may not be unsafe.

The form in which fluorine is ingested, however, also influences its effects upon teeth. Greenwood[32] found that pups developed dental fluorosis when fed sodium fluoride, while the same level of fluorine fed as bone meal did not produce fluorosis. Lawrenz[43] reported that a high calcium content in the diet depressed the sensitivity to the deposit of fluorine in the teeth.

While the literature does not offer satisfactory evidence as to the comparative topical effectiveness of fluorine in various forms, it would seem reasonable that the caries-reducing effectiveness of fluorine might be reduced as much as its toxicity by admixture with other products which lower its absorbability.

With more specific reference to the possible deleterious effects of the topical application of fluorine DeEds[26] reported on the use of ammonium fluoride to produce a rapid bleaching of teeth, and stated that there was a danger of producing mottled enamel. An editorial in the Journal of the American Medical Association[28] warned that the topical use of fluorine would produce mottling, although this was vigorously denied by Visscher[55] and Wilbur.[59]

While it may be improbable that the topical application of fluorine would produce mottling, it does not seem impossible that whatever shell of enamel was affected sufficiently to alter the caries process might also be rendered brittle just as fluorosed enamel has been reported to be fragile by Applebaum[2] and Smith.[52]

If it is assumed that as a result of topical application fluoride is to be held in contact with the teeth in a sufficiently strong solution for a sufficiently long time to permit adsorption on enamel, there may also be adsorption on root areas which might exaggerate the hardness of any calculus deposits present, and stimulate the further formation of calculus.

An editorial in the Journal of the Canadian Dental Association[30] advises against the addition of fluorine to drinking water, citing among the reasons the observations of Gottlieb that fluorine is bad for the tooth root, leading to more peridontal disease and loss of teeth.

Dean[21] has also observed that fluorine in drinking water as high as 4 ppm seems to predispose to gingivitis.

CONCLUSION

Opinions as to the justification for the addition of fluoride to dentifrices range from a conviction that such a step would be useless if not positively dangerous, to the opinion of one author that the incorporation of fluoride in dentifrices should be made compulsory.

It is the writer's present judgment that the effectiveness of adding minor amounts of fluoride to a dentifrice for lay use is not established, that the potential dangers of adding fluorine to a dentifrice are not to be ignored, and that, for the present, the use of fluorides should be limited to applications which are under strict clinical supervision.

[1] A. D. A. Research Commission, J. Am. Dent. Assn. **32**, 350-1 (March 1945)
[2] Applebaum, E., Dent. Cosmos **78**, 969-80 (September 1936)
[3] Armstrong, W. D. and Brekhus, P. J., J. Dent. Res. **17**, 27-30 (February 1938)
[4] Armstrong, W. D., North West Dentistry **21**, 125-8 and 142 (July 1942)
[5] Arnim, S. S.; Aberle, S. D. and Pitney, E. H., J. Am. Dent. Assn. **24**, 478-80 (March 1937)
[6] Atkins, A. Paul, J. Am. Dent. Assn. **31**, 357-7 (March 1944)
[7] Bibby, B. G. and Van Kesteren, M., J. Dent. Res. **19**, 391-402 (August 1940)
[8] Bibby, B. G., J. Dent. Res. **23**, 202 (June 1944)
[9] Bibby, B. G., J. Am. Dent. Assn. **34**, 26-32 (January 1, 1947)
[10] Bibby, B. G.; Zander, H. A.; McKelleget, Mary and Labunsky, Bertha, J. Dent. Res. **25**, 207-11 (August 1946)
[11] Black, G. V. and McKay, F. S., Dent. Cosmos **58**, 132-156 (February 1916)
[12] Box, Harold K. and Hodgins, H. J., Eng. & Contract Record **57**, 10-13, 28 (May 31, 1944)
[13] Bunting, Russell W.; Crowley, Mary, Hard, Dorothy G. and Keller, Margaret, Dent. Cosmos **70**, 1002-9 (October 1928)
[14] Buonocore, Michael G. and Bibby, Basil G., J. Dent. Res. **24**, 103-8 (April 1945)
[15] Cheyne, Virgil D., J. Am. Dent. Assn. **29**, 804-7 (May 1942)
[16] Cheyne, Virgil D., J. Dent. Res. **21**, **320** (June 1942)
[17] Churchill, H. V., Ind. Eng. Chem., Ind. Ed. **23**, 996-8 (September 1931)
[18] Cox, Gerald J.; Matuschak, Margaret C.; Dixon, Sara F.; Dodds, Mary L. and Walker, W. E., J. Dent. Res. **18**, 469-90 (December 1939)
[19] Cox, Gerald J. and Levin, Margaret Matuschak, "Fluorine and Dental Health," Am. Assn. Adv. Sci. 68-73 (1932)
[20] Crichton-Browne, James, Lancet **2**, (July 2, 1892)
[21] Dean, H. T., J. Am. Med. **107**, 1269-73 (October 1936)
[22] Dean, H. Trendley, "Dental Science and Dental Art." Gordon—Lea & Febiger 1938; Chapter XII, 387-414
[23] Dean, H. Trendley; Jay, Philip; Arnold, Francis A. Jr.; McClure, Frank J. and Elvove, Elias, Pub. Health Reports **54**, 862-88 (May 26, 1939)
[24] Dean, H. Trendley; Jay, Philip; Arnold, Francis A. Jr. and Elvove, Elias, Pub. Health Reports **56**, 365-81 (February 28, 1941)
[25] Deatherage, Chas. F., J. Dent. Res. **22**, 173-80 (June 1943)
[26] DeEds, Floyd, J. Am. Dent. Assn. **19**, 861-2 (May 1932)

[27] Editorial, J. Am. Dent. Assn. **27,** 1115-8 (July 1940)
[28] Editorial, J. Am. Med. Assn. **124,** 98 (January 8, 1944)
[29] Editorial, Brit. Med. J. 461-2 (April 1, 1944)
[30] Editorial, J. Can. Dent. Assn. **10,** 547-9 (December 1944)
[31] Gay-Lussac, DeM and Berthollet, Ann. de Chim. **55,** 258-75 (1805)
[32] Greenwood, D. A.; Blayney, J. R.; Skinsnes, O. K. and Hodges, P. C., J. Dent. Res. **25,** 311-26 (October 1946)
[33] Hodge, Harold C., Proc. Dental Centenary Celebration, March 1940, 640-6
[34] Hodge, Harold C., J. Am. Dent. Assn. **29,** 2063-8 (November 1942)
[35] Irving, J. T., Nature **154,** 149-50 (July 29, 1944)
[36] Jay, Philip, "Fluorine and Dental Health." Am. Assn. Adv. Sci. 63-7 (1942)
[37] Jay, Philip and Arnold, F. A. Jr., J. Am. Coll. Dentists **12,** 54-6 (March 1945)
[38] Jordan, W. A.; Wood, O. B.; Allison, James A. and Irwin, Vera D., J. Am. Dent. Assn. **33,** 1385-91 (November 1946)
[39] Klein, Henry, Pub. Health Reports **60,** 1462-7 (December 7, 1945)
[40] Knutson, John W., Armstrong, Wallace D., Pub. Health Reports **58,** 1701-15 (November 19, 1943)
[41] Knutson, John W. and Armstrong, Wallace D., Pub. Health Reports **60,** 1085-90 (September 14, 1945)
[42] Knutson, John W. and Armstrong, Wallace D., Pub. Health Reports **61,** 1683-9 (November 22, 1946)
[43] Lawrenz, M. and Mitchell, H. H., J. Nutrition **22,** 91-101 (July 10, 1941)
[44] Lipmann, F., Biochem. Zeitschr **196,** 3, (1928)
[45] Machle, Willard; Scott, E. W. and Largent, E. J., J. Ind. Hygiene and Tox. **24,** 199-204 (September 1942)
[46] Machle, Willard and Largent, E. J., J. Ind. Hygiene and Tox. **25,** 112-23 (March 1943)
[47] McClure, F. J., J. Nutrition **22,** 391-8 (October 1941)
[48] McClure, F. J. and Kinser, C. A., Pub. Health Reports **59,** 1543-58 (December 1, 1944) and, 1575-91 (December 8 1944)
[49] Miller, Benjamin J., Proc. Soc. Exp. Biol. & Med. **39,** 389-93 (November 1938)
[50] Morgareidge, Kenneth and Finn, Sidney B., J. Nutrition **20,** 75-84 (July 1940)
[51] Phillips, Paul H. and Lamb, Alvin R., Arch. Path. **17,** 169-76 (January 1934)
[52] Smith, Margaret Cammack; Lanz, Edith M. and Smith, H. V., U. Ariz. Agri. Exp. Sta. Tech. Bltn. **232** (June 10, 1931)
[53] Smith, Margaret C. and Smith, H. V., Am. J. Pub. Health **30,** 1059 (September 1940)
[54] Smith, Russell R. and Shaner, Edward O., J. Am. Dent. Assn. **31,** 1483-6 (November 1944)
[55] Visscher, Maurice B., J. Am. Med. Assn. **124,** 460 (February 12, 1944)
[56] Volker, J. F., Proc. Soc. Exp. Biol. & Med. **42,** 725-7 (December 1939)
[57] Volker, J. F., J. Dent. Res. **19,** 35-46 (February 1940)
[58] Weaver, Robert, Brit. Dent. J. **77,** 185-93 (October 6, 1944)
[59] Wilbur, Henry M., J. Am. Med. Assn. **124,** 460-1 (February 12, 1944)
[60] Wilson, Dagmar Curjel, Lancet **CCXL,** 211-2 (February 15, 1941)

The Patent Picture

Dispenser. Pat. *2,348,468*, May 9, 1944. Non-collapsible tube for toothpaste or the like has a shaft extending vertically through the center of tube and a vertical wing which barely wipes the inside wall. Tube has a vertical partition extending inwardly to shaft. As shaft is rotated, the contents are compressed between the wing and partition and extruded. Hyman B. Grace, 493 Adelaide St., London, Ontario, Canada. Groups 26—64; 40. Reg. No. 2,728.

Lipstick spreader. Pat. *2,109,411*, Feb. 22, 1938. Multiplicity of removable pads in form of a stack enclosed in container. Pads may be destroyed after use. Casing has openings at each end, one for lipstick and other for pads. Finger pieces raise or lower lipstick and or pads. Esther M. Buttschau, Box 463, Vero Beach, Fla. Groups 28—32; 39—81. Reg. No. 2,722.

Collapsible container. Pat. *2,366,770*, Jan. 9, 1945. Collapsible bellows-like container or receptacle, preferably of hexagonal shape, with foldable closure means integral therewith has many and diversified uses depending upon the material from which it is made. It is particularly useful as a cheap disposable container for garbage or the like. Container walls have extensions, flaps, and tabs which are folded with hook portions and slots interlocking to close container. Zelma P. Cordwell, 28 Lincoln St., Glen Ridge, N. J. Group 26—27—61—64. Reg. No. 2,726.

Closure. Pat. *2,107,244*, Feb. 1, 1938. Closure for collapsible tubes or other containers. Cap is unscrewed in conventional manner except that as the threads disengage, two hinge members become operable to permit pivoting cap where it is frictionally held while dispensing contents. Theodore R. Gilliland, 109 Adams Drive, Corpus Christi, Tex. Groups 33—73; 34—92. Reg. No. 2,743.

Display card holder. Pat. *2,340,421*, Feb. 1, 1944. Small, attractive holder readily molded from transparent plastic material and containing a magnifying front lens is so constructed that when placed on a flat surface, such as in store windows or on office desks, a price, name, or similar card will be displayed at such an angle that the inscription is readily discernible whether viewed from directly in front or at an angle. Cards may be easily inserted or removed and are effectively shielded from dust. Miriam Alice Obrist, 5—53 150th St., Jamaica, Long Island, N. Y. Groups 39—93; 40. Reg. No. 2,761.

Cosmetic case. Pat. *2,367,992*, Jan. 23, 1945. This invention relates to a novel cover for a lipstick or lip rouge case. A window in cover displays outline of lips and color of cosmetic in case. Should assist and promote sales as the purchaser can visualize the effect of its application to the lips. R. Berls, 390 West End Ave., New York 24, N. Y. Groups 28—32; 39—72. Reg. No. 5,469.

Traveler's kit. Pat. *2,261,157*, Nov. 4, 1941. A traveler's kit in which toilet articles are held on the under side of the cover. The "zipper" is set back in an upstanding flange extending above the top surface of the cover so that the articles may be removed by sliding them directly outward without contacting the "zipper" teeth. Articles need not be tilted for removal so bands are not stretched. Rollin W. Holbrook, P. O. Box 823, Church Street Annex, New York, N. Y. Group 31—61. Reg. No. 5,164.

Device for controlling and planning production, order dispatching, stores, and sales. Pat. *2,169,498*, Aug. 15, 1939. This patent presents a visual method for the control of stock, recording of sales and other activities in relation to planned business management. It consists of several panels on which are mounted printed forms, cards and tags which are moved or changed as work progresses so that an over-all view of a business may be provided instantaneously. The scheme allows a workable means to analyze, standardize and unify conditions which effect production, delivery or sales without the necessity of wading through a mass of data. Henry Molz, 363 West Lexington Drive, Glendale 3, Calif. Groups 27—82; 35—79. Reg. No. 3,835.

Rise of Revlon

*How a sixty-cent bottle of nail enamel came to influence the fashions of a nation**

FIFTEEN years ago lipsticks were identified as light, medium, and dark, and "blood-red" was the way the male population described any woman's fingertips that weren't natural.

LIPSTICK WARDROBE

The change in habits of the feminine part of the nation, so that today women have more lipstick colors in their wardrobe than they have hats, and change their fingernail enamel as easily as they do their handbag, directly parallels the rise of Revlon Products Corp., today the largest vendors of quality nail enamel and lipstick in the world.

So strong has been the influence of this company in changing the cosmetic-buying habits of women that one well-known department store recently ran an announcement of a new Revlon color with this headline: "Revlon introduces a new shade . . . and a whole nation's fingertips and lips change color!" Today names like "Pink Lightning," "Mrs. Miniver Rose," "Ultra Violet," "Fatal Apple," "Bachelor's Carnation" are American colloquialisms like Coca-Cola and Kodak.

Our emotional cosmetic names have provided food for satirical essays by Pegler; comic cartoons in publications like *The New Yorker;* themes for flower-growers; tags for national league women's bowling teams (where "Fatal Apples" play "Pink Lightnings" every Friday night in Detroit); handles for popular song recordings; gags for radio writers, and even verses for the *Saturday Review of Literature!*

All of this stems from small-unit sale items (Revlon nail enamel retails at sixty cents, the lipstick at $1.00; the face powders at sixty cents and $1.00) which enter the volume brackets of big business right through the front door.

How did it happen? Fifteen years ago the management of the company sensed that nail enamel, because of its color, could be promoted and sold as a style item instead of a commodity. Management then was Charles Revson, president; Joseph Revson, treasurer and general manager; Charles Lachman, vice-president and technical adviser. Martin Revson, youngest brother and now vice-president in charge of sales, was then in swaddling clothes.

As news and forced obsolescence are the secret of the fashion business, Revlon realized that if nail enamel could enter the realm of fashion instead of utility only, a woman would buy three or four colors a season and not wait to use up her one and only bottle.

Years of promotion have proved that this is true. So strongly entrenched in the minds of consumers are Revlon colors today and so powerful a vehicle are they for moving other store merchandise as well, that when Revlon sends a telegram to leading department stores throughout the country, announcing a new promotion, stores invariably devote a week of their Main Street windows and full-page advertisements to relay the news.

As a result, the company has not had a single year when supply has equalled demand. This dates from the day it began moving "cream" nail enamel into beauty salons from its tiny one-room office, at the same time that more highly organized, larger companies were trying to sell transparent polishes that are not opaque enough to allow for a wide range of variety of colors. Back orders are almost as heavy as billing, and the company ranks among the top three for volume, with only three basic items, nail enamel, lipstick, and face powder, instead of a multiple line of merchandise including many items.

NAIL ENAMEL THE STARTER

Back in 1933, cream nail enamel was received by beauty salon and consumer alike with great enthusiasm, for it gave the nails a covering that hid flaws as no product had ever done before. And it gave Revlon the "hook" by which they could enter the style business with a commodity.

With cream nail enamel, a range of reds could be developed that would not only flatter the hands, but would also harmonize with the clothes a woman wore. Crazy colors were soon dismissed as being unwearable and in bad taste, colors such as chrome-yellows, weird blues and greens, fantastic shades that were the first obvious ones to think of, aside from reds. However, subtle, smokey tones, in the spectrum of red ranging from light to dark, beautified a woman's nails and hands, and, at the same time, could be made to harmonize with her wardrobe. Thus, with the same technique a dress designer uses when he deliberately outmodes a fashion at the beginning of a new season, Revlon soft-pedalled old colors and put all its promotional efforts on the new shade.

The pattern was set, new colors were featured spring and fall with new fashions, and all efforts were focused on pushing the current shades. With the beauty salons as an immense sampling ground for Revlon Nail Enamel, these new shades flowed onto the fingertips of millions of women, and a cry arose from the top department stores from coast to coast who wanted this new type of nail enamel.

In 1936, the first retail department store account of Revlon was opened at Saks Fifth Avenue, where consistent consumer demand had forced this top-price, "class" store to stock a sixty-cent item! Since then, full banks of Saks Fifth Avenue windows, running straight up from 49th Street to 50th Street, and full-page newspaper ads run by Saks have appeared, heralding new Revlon colors and the exclusive Saks clothes designed to accompany them.

In 1940, Revlon introduced lipstick to match the nails and to match the clothes of the season. Playing the same fashion tune, this time with "matching lips and fingertips," Revlon has now climbed to leadership in the lipstick field, where the latest consumer-magazine surveys show it to have more than 60 per cent of the entire lipstick business in the world in its price range.

This is how Revlon's promotions are planned. The Colonel's lady and Judy O'Grady are sisters under the skin . . . but the public doesn't think so. Thus, six months, at least, before a new fashion color is launched, the deci-

* Compiled by the staff of Revlon Products Corp.

sion must be made on the name and the color itself. That means that scouts are constantly watching what is happening in the fashion world and the world in general to sense what will be good a half-year ahead of time. Then, from the color name and the color itself, a giant snowball starts to roll, for a great proportion of Revlon's $2,200,000 advertising budget and its $1,000,000 packaging, design and display budget, goes into the exploitation of new colors.

The packages are designed, the ads are keyed, the displays created, the direct mail material prepared, the cooperative store ads organized . . . all pegged to the theme of the new color. And in the shade and the name is the great gamble.

TIMING IMPORTANT

A sixth sense of timing is in no small measure responsible for the successful acceptance of Revlon colors and color names. For instance, without solicitation from the movie companies, Revlon plucked the rose out of the memorable movie success, "Mrs. Miniver," and created one of the great colors of the year in "Mrs. Miniver Rose" . . . a name that soon saw print fabrics develop, leathers dyed, artificial and real roses develop, and a whole new type of woman emerge in the fashion world, based on the unforgettable Mrs. Miniver, and exploited by leading stores all over America.

There is no pattern for Revlon color names, and no precedent, except good taste. From the streak of "Pink Lightning" that rode the fashion color wave for pink one season, they plunged into the lure of Eve with "Fatal Apple." There was trouble in Paradise that fall of 1945, for "Fatal Apple" was one of the few Revlon color names that the more conservative stores were a little timid about tasting. But how the public ate it up! What better proof of the topical, young, Americana quality of Revlon colors and color names than "Bachelor's Carnation" of spring 1946 . . . the first spring that the boys were home from overseas, out of uniform, sporting red carnations in the button-holes of their civvies once more? Even florists felt the impact of the Revlon cosmetic promotion, and featured "Bachelor's Carnation" in the windows, tied up with Revlon ads.

Came October 1946 and "Ultra Violet" in lipstick, nail enamel, and face powder was borne in on a wave of music. Columbia Recording Corp. bet heavily on a new Revlon winner and had Dinah Shore make a special new recording of "Who'll Buy My Ultra Violets?"

"If it's impossible, we'll do it" is a slogan around Revlon executive offices. Every color name, every color, is a radical departure from its predecessor. This spirit is in evidence in Revlon ads, too, for in the field of photography they are always experimenting with new art forms, new lighting, new layouts . . . lending their ears and eyes to courageous, creative photographers with a new point of view. Revlon's advertising agency is McCann-Erickson, Inc.

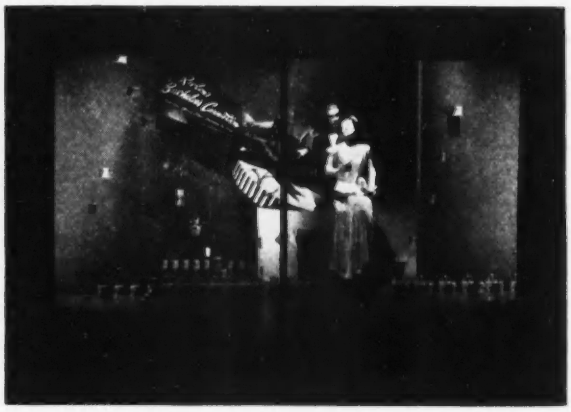
Ten or fifteen years ago color alone as a fashion and cosmetic force was negligible. A woman was satisfied to wear one black hat with her four or five dresses, and her gloves, bag, and shoes matched her topcoat, not her dresses or hats. Revlon started to make women color-conscious ten years ago by telling them to switch their nail enamel and lipstick as they would their dresses.

CONSISTENT ADVERTISING

And Revlon kept right on backing up their color credo by consistent advertising dollars. They pounded home this color message to American women for years, together with their conviction that nail enamel and lipstick should be worn in harmonizing shades at the same time . . . just as the leaders in the accessory fashion field kept on telling the public that shoes and handbags that matched were good fashion sense and good taste, too. An uphill job, this color education, but the brilliant results in 1947 speak for themselves. And, naturally, the most dramatic colors and color names in the world wouldn't continue to sell cosmetics if the intrinsic quality of the products themselves fell short. The watchful eye of Charles Revson maintains a vigilance that pushes perfection twelve months every year . . . with the result that Revlon standard top quality is taken for granted by their customers . . . like Steinway for pianos and Ivory for soap!

Thus, women demand more than just quality in Revlon cosmetics . . . they look for color, drama and fashion, too! That's why stores like Rich's in Atlanta, Bullocks in Los Angeles, Eaton in Canada, give elaborate fashion showings built around a new Revlon color and color-name . . . displaying their most tempting fashion merchandise. Very often the sale of a profitable mink coat, set of sables, or jeweled earclips is directly traceable to the influence of a sixty-cent bottle of nail enamel!

The famous Revlon "Bachelor's Carnation" inspired window displays of many well-known flower shops and department stores



New Woody-Type Odors

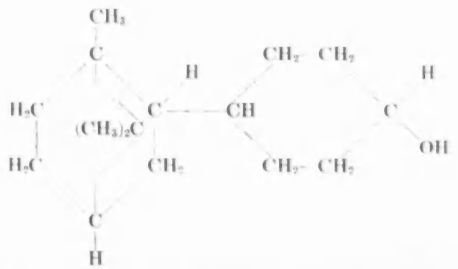
The structural variations which are responsible for differences of odor in substances may add interest to the problem of new synthetics

JOHN R. BYERS, JR.

SEVERAL interesting and important additions to the perfume industry have been disclosed recently in the vast amount of chemical and other technical data collected by the U. S. Army Intelligence in Germany. Among these are two new groups of aliphatic alcohols which are valuable because of the fidelity with which they reproduce the fragrance of the oils of sandalwood and vetiver.

ALIPHATIC ALCOHOLS

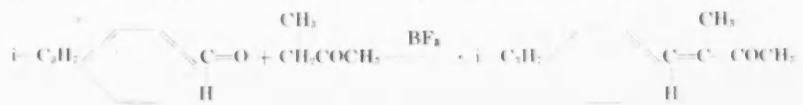
One group of these alcohols consists of a series of alkyl-substituted cyclohexanols. The lowest member of the series is 4-camphyl cyclohexanol which probably has the structure:



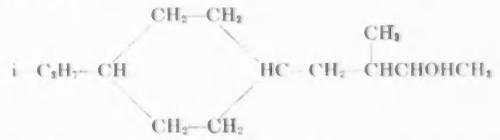
It seems likely that this substance can be made cheaply by starting with borneol and phenol. Borneol reacts with phenol at the para-position in the presence of acidic reagents such as *p*-toluenesulfonic acid or aluminum chloride. It is then necessary to hydrogenate the benzene ring of the product in order to obtain the fragrant cyclohexanol derivative. Analogs are obtained by the use of substituted phenols. These products actually have the true woody sandalwood fragrance. It should be interesting to note the effect on the fragrance of substituent groups on both the camphyl and the phenol rings.

The second group of alcohols is important not only because the individuals have odors of the sandalwood and vetiver types, but also because in their preparation a seldom-used type of aldol condensation is employed. This reaction is brought about by acidic catalysts such as boron trifluoride or the active earths.

An illustration of this reaction is the acidic condensation of cuminaldehyde with methyl ethyl ketone. The condensation takes place on the methylene group.

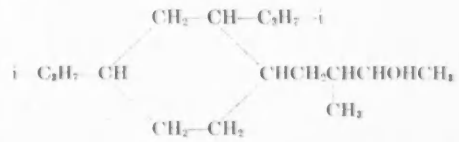


whereas, with basic catalytic agents, the methyl group always reacts. The unsaturated ketone is next completely hydrogenated to 2-hydroxy-3-methyl-4-(4-isopropylcyclohexyl)-butane:



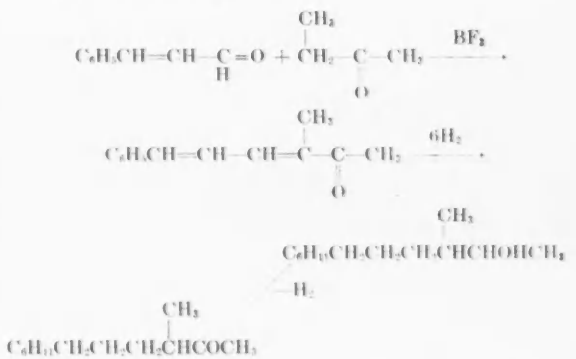
Upon dehydrogenating this alcohol, the ketone which is formed has the odor of East Indian sandalwood.

An interesting example of one of the effects of substitution in the benzene ring is shown by the alcohol, 2-hydroxy-3-methyl-4-(2,4-diisopropylcyclohexyl)-butane, which has the odor olibanum (frankincense):



It is prepared from 2,4-diisopropyl benzaldehyde (obtained as a by-product in the preparation of cuminaldehyde) condensed with methyl ethyl ketone in a similar manner and reduced as before.

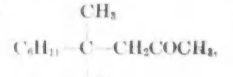
Lengthening the chain of the ketone seems to cause a reduction in the strength of the fragrance. The following outline shows the preparation of such a ketone, 2-keto-3-methyl-6—cyclohexyl hexane:



The price is secondary if the quality upholds sales

The sandalwoodlike odor is less pronounced. It has not yet been determined how far this chain can be elongated and still retain a useful fragrance.

Branching of the chain causes a change in the fragrance. For example, the saturated ketone,



has a fine and intense odor of vetiver oil. It is prepared by the addition, catalyzed by aluminum chloride, of benzene to mesityl oxide resulting in a compound which, upon complete hydrogenation to the saturated alcohol and subsequent dehydrogenation, gives the fragrant saturated ketone.

The acidic catalyzed reaction which has been described above for the formation of the unsaturated ketones has been little used either in the laboratory or in industry although it is apparently quite valuable. This reaction and several others used in the preparation of the fragrant substances are not complicated by any special techniques. They are straightforward and are easily handled in the plant. The use of these alcohols and their ketonic analogs in the perfume industry is also economically sound since most of the starting materials are not expensive.

A few of the structural variations which are responsible for differences of odor in these fragrant substances have been indicated: many others are immediately apparent. These may give added interest to the problem of new synthetics in the perfume industry.

Technical Abstracts from Scientific Literature

Cosmetic compositions intercepting light of short wave length such as ultraviolet light. *U. S. 2,327,899.* A polyhydroxy alcohol such as ethylene glycol or triethylene glycol, monosubstituted with p-amino-benzoic acid, is used (suitably in a dilute alcoholic solution) and is of neutral action toward nerve endings near the surface of the skin. (Through *J. of the Am. Pharm. Assoc.*, **34**, *45, 1945.*)

Cosmetic preparation. *U. S. 2, 333,093.* In a neutral preparation adapted for treating various skin affections, use is made of the product formed by esterifying sulfurized olive oil, castor oil or the like (suitably with use of an ethanolamine and various other admixtures).

Film-forming compositions suitable for use on the skin. *U. S. 2,338,416.* Water is used containing, per gal., about 0.5 to 4 oz. of aloin and at least ½ oz. of a water-soluble pelliculizing gum such as gum tragacanth (the gum and at least a portion of the aloin being dissolved in the water).

Oils of cinnamon-properties and assays. R. C. Darlington and B. V. Christensen. *J.A.Ph.A.*, **33**, *298, 1944.* The total aldehyde content of oil of cassia bark may range from 86 per cent in an uncohobated oil to 95 per cent in a cohobated oil. Cohobation produces a higher grade oil in terms of aldehyde content. The sulfite-bisulfite method is a reliable method of determining the total aldehyde content of oil of cassia. The percentage by weight of ortho-methoxy cinnamic aldehyde in the bark oil is very low. What the percentage in an authentic oil should be must be determined by obtaining an unadulterated oil from the leaves and twigs of *C. cassia.* The method for methoxy determination as outlined by the writer is reliable for the determination of ortho-methoxy cinnamic aldehyde in oil of cassia.

The refractive index of one cohobated extracted oil exceeded the upper limit of the U. S. P. specification, while that of the uncohobated oil was below the lower limit of the U. S. P. specification.

Testing of sandal oil. L. Fuchs. *Scientia Pharm.*, **13**, *21, 1942.* Adsorption spectra of East Indian and West Indian sandal oil were determined. The spectra are unreliable as criteria. A color reaction specific for West Indian oil is as follows: Two drops of the oil are dissolved in 4 cc of acetic anhydride and one drop of sulfuric acid added. East Indian oils give a yellow-brown coloring, rarely wine-red or red-violet, while the West Indian oil gives a deep blue color. (Through *J. Amer. Pharm. Assoc.*, **33**, *261, 1944.*)

Aqueous thickening solutions suitable for use with cosmetics. *U. S. 2,321,270.* A water-soluble alkyl cellulose, such as methylcellulose, or a water-soluble hydroxy alkyl cellulose is used with a thickening agent which may be 0.1 to 2 per cent of a water-soluble sodium salt of a dibutylphenylphenoldisulfonate or other water-soluble metal salt of an alkylated phenylphenolpolysulfonate in which the alkyl group contains less than 10 carbon atoms, such thickened solutions being suitable for use as thickeners in various pharmaceutical or cosmetic compositions.

Specificity of cutaneous allergy to procaine in man. F. J. Orland, P. Flesch and S. Rothman. *Proc. Soc. Exptl. Biol. Med.* **56**, *110-12, 1944.* In the subject studied eczematous contact-type reactions were produced by a group of p-aminobenzoic esters containing a secondary or tertiary amine in the side chain. The threshold concentration for procaine salts was 1:56,000. The length of the side chain was unimportant. Substitutions of hydrogen by alkyl groups in the aromatic amino group or in the side chain did not alter the antigenic effectiveness. Benzoic acid esters with a tertiary amine in the side chain but without an aromatic amino group, or with an amino group in m-or o-position were ineffective. (Through *C. A.*, **38**, *4993, 1944.*)

Treatment creams compete with perfumes for position in sales . . . Instruction on use of products is gaining store support

JEAN MOWAT

COSMETIC Trends IN THE Mid-West

PERFUME to add smartness and distinction to the costume is a 1947 must. The Egyptians had their own formulae, and the queens and their ladies-in-waiting were heavily scented. But perfume in America has a strong French accent, and today the many dram shops springing up in every major store in a city of even limited population attest to the fact that fresh fragrance is now a must for Spring-Summer wear.

French perfumes again are coming across the ocean in every ship and in larger volume than many buyers expected to see before next Christmas. The American makers have proved to be so successful in the perfection of finer perfumes that many stores want to handle the French lines, as well as the well known American brands which have won a place for themselves during the war years.

Perfumes came to be a fragrance to delight the senses through an enterprising manufacturer of goat skin gloves. The story is told that this man crushed some of the fragrant flowers that grew in his native Grasse, France, and combined them in the leather processing. The gloves made a tremendous hit in the world more than 200 years ago and soon every glove maker was asked for scented products.

Not until after the French revolution did people discover how their kings and queens had been so fragrant, and they then demanded perfumes. That was the beginning of the perfume industry which today thrives in Grasse, which is the center from which fragrances come to America. Today, one may wear her finery and complement her corsage with the same fragrance in cologne, toilet-water or perfume, all because generations ago royalty was unwashed and demanded a strong perfume to overcome b.o. which even then was recognized as not too pleasant. Perfumes had their inception as a covering up scent. Today the idea is carried further into the realms of mystery and copy-writers ought to have gray hair for the worry expended in trying to describe the Easter and Spring scents. While America is still Grasse's largest customer, India is second, and a black market is reported which rivals any ever recorded. So great was the Orientals love of a fragrance that when guns were supposedly being taken to India and China, the cargos were—perfumes.

HOW THEY SAY PERFUME . . . FOR YOU ALONE

Chapman's of Milwaukee says: "Hattie Carnegie presents a completely rounded, co-ordinated story for spring, 1947 . . . the silhouette curvaceous, culminating in the campanila skirt, the small, deep horsehair cap-bonnet, the 'Hypnotic' after-five perfume and the genius of color harmony cosmetics epitomized in her new jewel lipstick."

Yonkers, Des Moines uses a quarter page to display a rare-type of bottle, perfume filled and states: "Who finds this mystery blooming here, alone and rare, becomes a temptress . . . your secret . . . Desert Flower . . . a new, enchanting perfume" and toilet water can be had to match. Wahl's of Duluth suggests one will find perfection for Spring costume in the Night scented stock . . . reminiscent of an English garden at nightfall . . . white phlox toilet water is "head-turning, heart-stopping," and its plugging of Royal Purple is "rich and heady warmth that will capture his heart and yours."

Goldblatt's, Chicago used such samples of intrigue to lure the consumer to buy as these lines: "Rich, rich winked with the blue of diamonds . . . sweet, sensuous fragrance that casts a spell no man can understand or resist . . . reminiscent of days gone by . . . haunting, lovely . . . light-headed fragrance . . . blossom-fresh fragrance . . . as lilting as the shower 'kist' petals of spring . . . for exacting lady, flowers, wispy veils, new spring beauty . . . heavenly shades" and concluded its oration by the comment that if one choose fragrance it will be "pink clover drifts through the air." And as a buyer you may ask why your perfumes in bottles, imports at that, do not move with the speed of Saturday's special coffee cake.

With such beauty expressed in terms to out-fragrance fragrance, perfume sales have had as competition the past six weeks—only treatment creams.

TREATMENT CREAMS IN TOP SALES POSITION

Much of the spring advertising had to do with the important fragrance for the Easter costume . . . which after all was going to be worn much longer than the Easter period lasted. Yet throughout the Middle West stores in Kansas City, St. Louis and the Twin Cities enjoyed a heavy Spring sale on treatment lines.

Down the street in that same city, usually called Twin, another store had given space to some educational information and shown what Spring winds did to roughen one's complexion. The result was an excellent sale. Every woman knew her skin needed attention. Every woman who came in, did so, and made a purchase. This store is one that believes in the combination of sales. Minneapolis women may well be distinguished for they have learned the value of the right cream for the right type of skin. One

combination included eye cream (this is being given a tremendous push by every house at the moment and every store is setting aside a little display to stress it) cleansing cream, a hormone cream and another of a homogenized and pasteurized type. Sales of the unit were pushed.

The best examples of how to sell are still being featured by the chain drug stores and a one item sale is considered not just a poor sale but an unintelligent application of selling technic. Department store buyers, finding many of their heads of stock going over to these chains, are now ready to give instruction to the entire force so that anyone can sell any product the store has.

Every woman wants to look natural in her make-up, to have the appearance of radiant health, and to have an allure and an appeal for her own family and her friends. Because so few average women can afford to patronize an expensive beauty shop for treatments and learn some of the so-called secrets of make-up. The Fair, Chicago, has held its second make-up clinic. The first, last Fall, was rated an unusual success but only one announcement was made in the newspapers and it was only one part of a formal fashion program. Yet the returns from that demonstration are still bringing in business.

The clinic proved that few women knew how to apply a cleansing cream, and less how to put on rouge that would look natural. Convinced that there was a great chance to directly aid women in understanding what creams would do for their skin, and how to apply these for the best result, Miss Nagler decided a second clinic, a post-Easter affair, would be held.

Announcements were posted in the department. Each cosmetic or perfume ad carried a line regarding the time and place, and the store's own radio program gave it a time signal. Thousands of women jammed the hall to learn how to be more beautiful. The acceptance of the idea was so tremendous that many women were unable to be seated. There were clinics for the business girls during evening hours. The day-time groups were for women from the home who have little time, or didn't know how to use cosmetics, to add freshness to their skin.

The results of this second clinic have been excellent. Treatment lines have moved, cream rouge, versus dry has been sold with a knowledge of how to apply it, and how to remove it. Miss Nagler did not just stop with the idea of treatment lines, but she included how to care for the hair, which was equally as important. The Fair has one of its largest departments handling cream and oil shampoos, scalp ointments, waxes to keep the hair in place and that important after-permanent-wave-lotion-shampoo and cream, as well as special soaps for perfect shampoos. All these had a place in the discussion with results that can well carry through the Summer.

DRAM SHOPS ARE HERE TO STAY

More than a year ago Carson Pirie Scott & Co., opened the initial dram shop in Chicago. Mention of this has been made in these pages before, and that other stores were copying the idea. Now the idea has expanded so much that many stores in the Middle West have made a sketch of the floor plan, its traffic location, and are only awaiting the shipment of bottles to open their own sections.

"French perfumes are always an asset to a smart department," said a leading buyer, "but many women do not want to pay the price for them. Others have found an American fragrance they favor and so we'll install a dram shop in a separate section just as soon as we've enough bottles to handle the sale. While we do a dram business now, it is nothing to what can be built up. Women will spend $1 or more for a small bottle and take a dozen different fragrances but they would not pay $15 for a bottle of just one fragrance. There is a psychological difference and we want to capitalize on it and really stress the fine perfumes made in this country. We have no quarrel with imports, and our store needs them, if only for prestige," he said.

WEATHER CASTS ITS SHADOW

The brilliant sunshine of April-May created a demand for more brilliance in nail polish and in matching lipstick. Such presentations had excellent acceptance, when backed by well known companies. Right here it might be well to insert the report from all major cities that well known and featured lines are having repeat calls while new lines, still struggling for a place in the spot-light are lagging in sales.

Leg-lotion bottles have made their appearance. Many buyers wonder about the future of this type sale. Seamless hose is so sheer, and so comfortable to wear that a number of buyers have expressed the idea that only the bobby-soxers will wear leg-lotion. "If they do," commented a hosiery buyer, "it will be the first time. They will wait to get tanned and not spend their money when the sun will do the job for them."

This buyer gave a new idea to cosmetic departments. "What I don't understand," she said, "is why the leg-lotions are not suggested as the perfect way to retain one's Florida or Nassau tan. Looks to me like a good idea . . . the same can be said for those deep toned creams for under the powder . . . keep your tan, could be a basic idea," she said.

The travel motif was suggested by Hudson's, Detroit, who said, "a touch of Paris on your lips with Guerlain's new formula lipstick," it was said to have the magic of genius in its color and effect.

Mandel Brothers, Chicago, has been giving considerable presentation to the bath and suggest oils to be used in and after the bath. Friction lotion is the new idea and that plus the assorted fragrances in bath oil is a trend that continues to gain. Bath sachet mitts for the tub (and equally as good for the shower) are a gift par excellence for the traveler or the stay-at-home and are finding a spot in showers for Spring brides.

How-to-use the products is gaining more store support and during the past month Younkers, Hudson's, and The Fair all used this idea as one on which they built new sales, merely through intelligent demonstration. Some buyers complained that business was slow. But they offered the customer nothing but well known lines, yet giving no new idea of their use. Where an idea was offered a sale was made and price resistance gave way. It is not so much resistance today, as it has settled down to a demand for finer quality at a reasonable price.

A hint of a change in presentation is shown in the bill-stuffers which offer one a sample in exchange for the notice. But no name is ever recorded. Here is a chance for a good follow-through policy but the average department store misses it. The specialty shop always takes names and addresses, and benefits by the up-to-date mailing list when something new arrives.

Mineral Oil and Petrolatum

MILTON J. GOLDEN* *Mineral oil and petrolatum are important ingredients in pharmaceuticals and cosmetics . . . Their properties and stability are presented*

THE use of mineral oil in the treatment of certain cases of chronic constipation is said to have been introduced by Sir Arbuthnot Lane of England in 1913, and it has since become a most popular remedy for this condition.

USE OF WHITE MINERAL OIL

In addition to its already established use as an intestinal lubricant, white mineral oil has become an important ingredient of present pharmaceutical and cosmetic preparations.

OCCURRENCE

Commercial white mineral oils are derived from various crude oils, which have been classified into three main types, a) the naphthene base crudes, b) the paraffin base crudes and c) the mixed base crudes. The naphthene base crudes, from which heavy white mineral oils are obtained, are found on the Gulf Coast fields and in California, and consist chiefly of naphthene hydrocarbons of cyclo-paraffin and cyclo-olefin structure. The principal sources of the paraffin base crudes, on the other hand, are the Pennsylvania fields. They contain straight chain hydrocarbons of the paraffin series and serve as a source of supply for mineral oil used in the manufacture of pharmaceutical and cosmetic creams. The mixed base crudes are present in the Mid-Continent fields, in sections of Texas and Oklahoma, and contain both types of hydrocarbons.

REFINING

All white mineral oils are derived from the refining of these three types of crude oils. The present process for manufacturing mineral oil is reported to have been invented by J. Markovnikov in 1887 and perfected at a later date by Grigori Petroff.

In the refining of white mineral oils the light fractions, such as gasoline, naphtha, kerosene and fuel oils, are removed by distillation. The remaining residue is distilled at high temperatures, and one of the high boiling fractions is used as the starting material for white mineral oil. Subsequently, this oil fraction is treated with sulfuric acid, washed with caustic soda and filtered by various processes. This treatment serves to remove the unsaturated hydrocarbons which are chemically unstable and which impart to unrefined oil its typical odor and taste.

Oils so refined should be colorless, odorless, tasteless and free from unsaturated hydrocarbons.

ABSENCE OF IMPURITIES

One of the major requirements of an oil designed for external or internal use is the complete absence of these unsaturated compounds and other impurities. Moreover, oils used externally for cosmetic purposes must also be free from these undesirable unsaturated compounds so as to avoid any skin irritation. Not only should the oil be without color and odor, but it should remain so. A refined oil should be free from unsaturated substances and should possess a high degree of stability. Not every colorless oil is necessarily a highly refined oil; such an appearance may also be obtained by simple filtration.

STABILITY

It is known that some mineral oils will develop a peculiar kerosene-like odor and taste upon prolonged standing or exposure to sunlight. This is believed to be due to the formation of peroxides within the oil.[1] This peroxide development should be prevented by rigorous purification, and the eventual content of peroxides in mineral oils, developing after long standing, may then serve as an indication of their purity. It is, therefore, imperative that pharmaceutical and cosmetic mineral oils should be stable over prolonged periods of time with respect to odor, flavor and the development of peroxides.

METHODS OF TESTING

The Pharmacopoeia of the United States provides the chemist with test methods for the determination of such impurities as solid paraffins, sulfur compounds and carbonizable substances in mineral oils. Any oil which meets these specifications is considered suitable for internal and pharmaceutical use. Despite the fact that the tests described in the U. S. Pharmacopoeia are well designed to show the present degree of refinement and purity of a mineral oil, they do not include any specific test method whereby a prognosis can be made as to the future stability or shelf-life of a given oil. This question of mineral oil stability has been disregarded probably because of the technical difficulties inherent in attaining an accurate prognostic procedure.

Although several methods have been proposed for determining the stability of a mineral oil, none has been approved as yet. Formerly, oil stability was tested by exposure to direct sunlight, heat or ultra-violet light,[2] with

* Research Laboratories, McKesson & Robbins, Inc., Bridgeport, Conn.

subjective detection of the presence of odors. Mineral oils have also been studied spectroscopically[3] by comparing the degree of absorption at various wavelengths and the presence and quantity of carbonizable impurities. The change in interfacial tension[4] between a layer of 0.02 Normal sodium hydroxide and the oil has been used to determine the stability of pre-heated oil samples. Finally, the reduction of a potassium permanganate solution[5] by various purely refined paraffin oils, heated to 150 deg. C., has been made a basis for comparison.

Some of these methods are impractical for routine examinations, since they require special equipment and skilled workers, and are time-consuming because weeks may elapse before any appreciable odor or deterioration may be noticed. Whereas most of the previously mentioned tests for determining the stability of highly refined mineral oils are based upon certain physical factors, stability can be determined chemically by measuring the degree of oxidation of the uncolored ferrous ion to the colored ferric ion by peroxides present in heat-treated oils. The developing pink or red color can then be determined colorimetrically.

This colorimetric method has been used by several oil companies and individual investigators,[1] employing a colorless solution of ferrous sulfate, ammonium sulfocyanate and sulfuric acid for the detection of peroxides. The oils are heated either under steam pressure in the autoclave or by direct heat. The test solution is then added, and the development of a pink or red color, indicating the presence of peroxides, is noted.

PEROXIDE TEST

The above-mentioned reaction was put to use in developing a method[6] which made possible the expression of the expected shelf-life or stability of mineral oil in time units. Samples of mineral oil are immersed in a 300 deg. F. oil bath for various time intervals from 2 to 25 minutes. The test solution, consisting of ferrous sulfate, ammonium thiocyanate, sulfuric acid, reduced iron filings and iron wire, is then added and the color development observed. The color will vary from a faint pink tinge to dark red, depending upon the amount of peroxides formed by the breakdown of the oil. The presence of peroxides in the oil sample is detected by the development of a pink to red coloration of the lower aqueous layer in the test tubes. The tube with the lowest heating time exhibiting a pink coloration after shaking with the test solution is regarded as the Peroxide Test Value, expressed in minutes of heating.

The Peroxide Test for mineral oils[6] has been used for several years in this laboratory, and it has been evaluated so that minutes of heating and detection of the degree of peroxides formed provide a means for establishing a prognosis for the stability of a certain mineral oil for various lengths of time. If an oil develops peroxides after heating for two minutes, it is considered to be unstable and of poor shelf-life and medicinal quality. On the other hand, an oil which gives a colorless test with the ferrous thiocyanate solution after being heated for 20 minutes or longer is regarded as stable and of good quality.

Samples of mineral oil of several brands with varying Peroxide Test Values were stored under normal drugstore environmental conditions and tested at frequent time intervals for stability as indicated by the development of odor, flavor and of medicinally undesirable peroxides.

Table I summarizes the coordination of the values in our test with the observed shelf-life and the stability of mineral oils.

TABLE I
Coordination of *Peroxide Test* with Shelf-Life and Stability of Mineral Oils

Sample of Various Brands	Peroxide Test in Min.	Approximate Stability	Shelf-Life
A	1 - 2	1 - 2 mo.	poor
B	5	6 - 8 mo.	fair
C	10	10 mo.	good
D	15	1 yr.	good
E	20 and over	2 yr. and over	excellent

SIGNIFICANCE

This suggested Peroxide Test offers a means of determining a new constant or property for both medicinal mineral oils and oils used in pharmaceutical and cosmetic preparations. Measurement of the expected stability of different oils is thereby made possible.

In the pharmaceutical use of mineral oil, it is of the utmost importance that careful consideration be given to the factor of stability. The values of the Peroxide Test offer themselves as a yardstick in this respect. A Peroxide Test Value of 15 minutes, that is, the first appearance of a pink color in the test solution in the oil sample which had been heated for 15 minutes has been suggested as a minimum standard requirement not only for medicinal mineral oils but also for oils used in the manufacture of pharmaceuticals and cosmetics. Oils exhibiting such a Peroxide Test Value will be of high purity and stability, and will, therefore, be suitable for prolonged use.

PETROLATUM

A substance closely related to white mineral oil which has also become an important constituent of pharmaceutical and cosmetic preparations is petrolatum. In contrast to mineral oil, which is a liquid under normal conditions, petrolatum, consisting of a mixture of solid and liquid hydrocarbons, is semi-solid at ordinary temperatures. It is amorphous and micro-crystalline and can be regarded as a colloidal system in which two phases are present, an external phase of solid wax and an oily internal phase. In order for such a system to exist and be stable for a reasonable length of time, a third component, a "gel-former" or proto-substance,[7] is required.

This proto-substance, which tends to contribute to the emollient and soothing properties of petrolatum, is said to be present in sufficient quantity in natural petrolatum, but is often removed in the refining process. An insufficient amount or lack of this gel-former destroys the colloidal system so that such a petrolatum will tend to separate and cause the objectionable "sweating." Intense heating and strong chemicals would seem to destroy this proto-substance, and, therefore, such drastic treatment should be avoided in the refining of crude petrolatum.

OCCURRENCE AND PURIFICATION

Petrolatum is obtained chiefly from Pennsylvania paraffin and Midwestern mixed base crudes. In the preparation of U.S.P. petrolatum, the crude petrolatum, prepared from the residue left in the stills after the distillation of petroleum, is purified by adsorption, bringing the substance in contact with such porous materials as Fuller's earth or charcoal. The adsorptive powers of these filtering

materials remove from the crude petrolatum the impurities which give it color, odor and taste. Repeated purifications tend to produce a light petrolatum, with a color range from amber to snow white.

This adsorptive process is lengthy and time consuming. The end product, however, is superior to the commercial synthetic combinations of solid paraffins and heavy lubricating oils and to the products obtained by the more rapid methods of treatment with strong chemicals, since the proto-substance present in natural petrolatum is preserved.

PROPERTIES

In the selection of the proper type of petrolatum for a specific purpose, several important properties must be considered, namely fibre characteristic, melting point and consistency. For most pharmaceutical and cosmetic preparations, a medium fibre is generally used. A short fibre petrolatum, characteristic of synthetic petrolatums and those refined by chemical treatment, is undesirable since it tends to produce a thin body and lacks the smooth consistency usually found with the medium fibre. A long fibre petrolatum, on the other hand, produces a sticky and stringy finished product. The melting point demands consideration and should be sufficiently high so that the finished preparation will not liquefy at elevated temperatures. Furthermore, correct and uniform consistency is by far one of the most important factors in determining the suitability of a petrolatum.

The Pharmacopoeia of the United States has recognized the importance of the purity of petrolatum, and has, therefore, included tests for ash content, organic and mineral acids, alkali and color, in addition to the properties already mentioned. The introduction of such additional characteristics as low rate of oxidation, absence of rancidity, and resistance to pathogenic bacterial and mold growth may suggest new uses and may provide the solution to certain difficult manufacturing problems.

With proper selection and information concerning the fibre, melting point and consistency of a petrolatum, the fullest benefit can be derived from its use in pharmaceuticals and cosmetics.

[1] P. L. Burrin, A. G. Worton and F. E. Bibbins, J. Am. Pharm. Assoc., 25, 27-31 (1936).
[2] L. W. Green and R. E. Schoetzow, J. Am. Pharm. Assoc., 21, 1286 (1932).
[3] S. A. Shau and I. B. Nielsen, Quart. J. Yearbook Pharmacy, 3, 260 (1930).
[4] G. Arditti, Compt. rend., 192, 944 (1931).
[5] J. Rae, The Pharmaceutical Journal, 154, 155 (1945).
[6] M. J. Golden, J. Am. Pharm. Assoc., 25, 76 (1946).
[7] E. Meyer, J. Am. Pharm. Assoc., 24, 319 (1935).

L-B Hair Oil Co.'s Employee Benefit Plan

WHEN Sam Silverman, ace salesman for the L-B Hair Oil Co., Los Angeles, died of cancer in January, 1945, his sorrowing widow was incredulous when John H. Olson, L-B's president, presented her with a check for $2500. Sam had not carried insurance for years—his disease had ruled him out. Fortunately for Mrs. Silverman, L-B had been storing up regular deposits on her husband, at no cost to him, and this foresight led to the accumulation of a rather tidy sum which was most needed and welcomed by the widow.

And when Alice Parker decided to quit L-B last winter to look for another job, she was speechless when a company official told her she had $340 coming to her, in 3 monthly installments, over and above her regular paycheck. "You've earned it on the company's plan," was the explanation. "We hope it helps tide you over till you find the job you want."

RETIREMENT INCOME PLAN

Since L-B installed its present retirement income plan a few years back, both front office and the employees have been most happy about it all. The plan was set up to protect the company's employees three ways: (1) In the event of death, to provide an insurance fund for beneficiaries; (2) to provide emergency funds in case an employee decides to leave the company; and (3) to establish a retirement income fund. This insurance doesn't cost the employee a cent—but it costs L-B, a relatively small company employing less than 100 people, a cool $16,000 a year. Company officials John H. Olson, Oscar Henriksen and Bill Doyle have figures to prove that it's worth every cent of that and more in pure morale alone, not to mention the tangible benefits afforded to those who have occasion to collect.

"The Plan," as it is always referred to, is one designed to serve the dual purpose of attracting the best of skilled help, while maintaining the high level of morale and protection among those already on the payroll. In a highly competitive labor market, L-B is happy to be able to attract intelligent, competent workers to its laboratories with legitimate "bait" other than the costly one of exorbitant wages.

Under this unusual plan, an employee becomes eligible to participate within six months after he or she goes to work at L-B's laboratories. It does not matter whether the employee is "insurable" or not, as this plan is worked out to permit participation by everyone, regardless of age or physical condition. The "Coordinator"—a representative of the firm of trust fund specialists which administers the program—makes a full and detailed explanation of the entire system to the employee, showing him in detail how the company pension will allow a comfortable income when retirement rolls around.

ENDOWMENT AND LIFE INSURANCE

The entire structure of the plan, of course, is based upon the endowment and life insurance which is set up for the employee. In an era of many and varied points of friction between labor and management throughout the country, the L-B plan, as well as thousands similar to it, is working smoothly and providing new incentive to both employee and employer. L-B's John Olson says:

"We feel that this plan is an unqualified success. It has certainly done wonders for the morale of our people here. Many of these people were not insured at all—and quite a few were insured for such small amounts that they felt no security at all. This company plan guarantees them a retirement income and also affords protection for their dependents in case of death. And they always know, too, that if they choose to leave us they will have a nice little sum to tide them over while they look for another job."

There seems to be little question that the L-B case is another one that proves that the right kind of employer-employee benefit plan, properly coordinated, does reduce turnover, increases efficiency and loyalty, and helps materially to narrow the gap between labor and "the boss."

Packaging Portfolio

PEGGY SAGE

PEGGY SAGE: Peggy Sage has designed a whimsical little wardrobe that holds two rows of nail polish. "Color Collection" has sketches of dresses hanging on the cover of the box. There's a color chart inside the wardrobe door that matches nail color with costume shade.

DERMETICS: New bottle labels in coral and silver are introduced for Dermetics' "Complexion Kit." They blend with the coral platform which the box provides for the ivory-toned Grecian bottles. The cover of the box is gold and white with lettering and the gazelle trademark in coral.

MAYBELLINE: A new slim scarlet plastic case has been designed for Maybelline cream mascara. Compact and complete, the case contains a generous tube of cream mascara and a large-sized brush.

DERMETICS

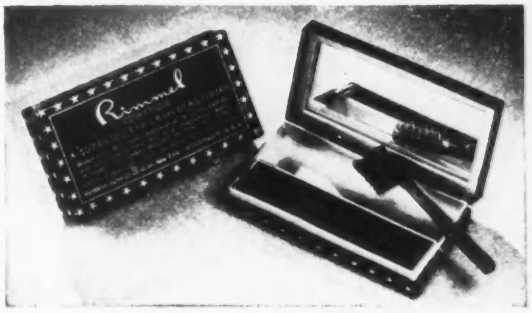
MAYBELLINE

HATTIE CARNEGIE

HATTIE CARNEGIE: Carnegie Blue fragrance in a crystal head bottle nestles in a dainty boutonnaire on a pair of sachet pillows. The gift items are boxed in the Carnegie tradition, typically feminine, with lace frills, with flowers and ribbons.

RIMMEL: Mascara is packaged by Rimmel in a new blue box, starred in gold, and with gold print. A mirror on the inside cover aids the simple application of mascara. The brush is set deep within the specially grooved base of the box to prevent dampness of the cover.

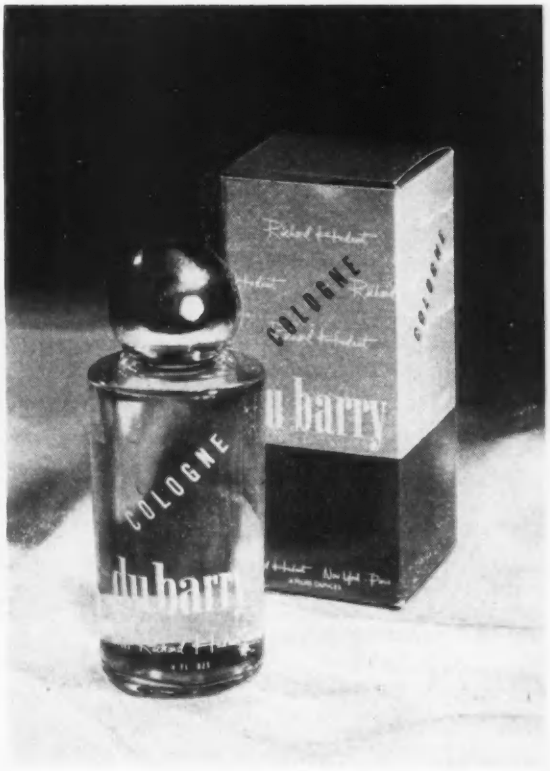
RIMMEL



RICHARD HUDNUT: A new DuBarry cologne is being introduced by Richard Hudnut. The very modern bottle is attractive in its simple, rounded design, and is topped with a large, gold metal ball cap. The bottle comes in a deep cerise and French blue box.

RICHARD HUDNUT: The new DuBarry make-up ensemble, "Double Treasure," by Richard Hudnut contains a golden metal lipstick case which has a lucite base, and a box of DuBarry face powder blending with the color of the accompanying lipstick. The attractive turquoise and white box is decorated to tie in with the name of the new package.

RICHARD HUDNUT



RICHARD HUDNUT

CAREY P. McCORD, M.D. *Chemistry and physics of hair waving, thioglycolates and their direct action on the hair are discussed*

PROPERTIES OF Thioglycolates

BASED on the principles just described the results shown in Table I were obtained.

The commercial preparations casually tested were not selected. All that were available at one drug store were purchased. While all except Crowning Glory are believed to represent ammonium thioglycolate, this appraisal depends solely on the odor of ammonium.

The derivation of more sulphur from stabilized preparations than from the same material unstabilized might appear to be anomalous. Actually these higher findings indicate the retention of sulphur that in the unstabilized form already would have been dissipated through decomposition.

No significance whatever is attached to minute deviations, such as .007 and .005 mg. Such errors and more are well within the limits of the accuracy of the method.

All of the commercial preparations casually tested by the method under discussion were also tested with the silver cyanide apparatus. From none was derived more than traces of hydrogen sulphide.

Contact between hair and thioglycolic acid (not thioglycolates) greatly increases the quantity of liberated combined mercaptides and hydrogen sulphide.

From all the foregoing, justification appears to exist for the contention that no manipulation of cold wave materials likely to occur either in the beauty shop or at home would give rise to sufficient quantities of hydrogen sulphide to warrant apprehension as to systemic disease.

TABLE I

SOLUTION	AMOUNT	TIME	TOTAL H_2S AND MERCAPTIDES
Thioglycolic acid (84%) Room Temperature Without hair	100 cc.	1 hr.	2.37 mg.
Thioglycolic acid (84%) Room Temperature With hair	100 cc.	2 hr.	10.8 mg.
Thioglycolic acid (84%) Boiling	50 cc.	½ hr.	1.6 mg. (comes over as mercaptan sulphur)
Thioglycolic acid (84%) Room Temperature Without hair	1 cc.	1 hr.	.0004 mg.
Thioglycolic acid (84%) Room Temperature With hair	1 cc.	1 hr.	.0012 mg.
Crowning Glory (Stabilized) Room Temperature Without hair	45 cc.	1 hr.	.0023 mg.
Crowning Glory (Stabilized) Room Temperature With hair	45 cc.	1 hr.	.0018 mg.
Crowning Glory (Unstabilized) Without hair	45 cc.	1 hr.	.0007 mg.
Crowning Glory (Unstabilized) With hair	45 cc.	1 hr.	.0006 mg.
Crowning Glory (Stabilized) +25 cc. Mineral Acid	45 cc.	1 hr.	.003 mg.
Thioglycolic acid (84%) +25 cc. Mineral Acid	50 cc.	1 hr.	1.87 mg.
Crowning Glory +Neutralizer With hair	45 cc.	1 hr.	.005 mg.
Crowning Glory +Neutralizer Without hair	45 cc.	1 hr.	.006 mg.
Commercial Product "W" Room Temperature Without hair	30 cc.	1 hr.	.0013 mg.
Commercial Product "W" Room Temperature With hair	30 cc.	1 hr.	.0012 mg.
Commercial Product "X" Room Temperature Without hair	25 cc.	1 hr.	.0014 mg.
Commercial Product "X" Room Temperature With hair	25 cc.	1 hr.	.0013 mg.
Commercial Product "X" Room Temperature Without hair	25 cc.	1 hr.	.0013 mg.
Commercial Product "Y" Room Temperature With hair	30 cc.	1 hr.	.00071 mg.
Commercial Product "Z" Room Temperature Without hair	25 cc.	1 hr.	.0012 mg.
Commercial Product "Z" Room Temperature With hair	25 cc.	1 hr.	.0021 mg.

STABILIZATION AGAINST HYDROGEN SULPHIDE

The early unfavorable experience from mineral sulphides as a source of hydrogen sulphide has engendered a continuing state of apprehension with regard to all sulphur bearing keratin modifiers. Although hydrogen sulphide in quantities sufficient to induce systemic disease has never been detected in any commercial cold wave solution of the thioglycolate type (such as tested), the presence of any measurable amount has been accorded disfavor. The work of Mulvaney indicates the production of thioglycolic acid in superior state but some hydrogen sulphide still appears in some products. One thioglycolic acid manufacturer admitted inability to eliminate all hydrogen sulphide through customary methods of stabilization. The validity of this attitude was questioned and search was made for a practical stabilizing agent effective against hydrogen sulphide liberation. Several scores of potential stabilizers were investigated with unsatisfactory results from the majority. Several proved chemically acceptable, but unfortunately were themselves toxic, which fact precluded use. Various organic lead compounds serve well as inhibitors but obviously have no place in cosmetics. It is

(This article is continued from the April issue of THE AMERICAN PERFUMER.*)*

From The Industrial Health Conservancy Laboratories, Detroit, Mich.
Reprinted from *Industrial Medicine*, December, 1946.

possible that the best stabilizers for this purpose may be found in certain amino acids known to the intestinal tract. The product chiefly investigated is stabilized to the point that no (or merest traces of) hydrogen sulphide has proved detectable. This protective action has persisted over an approximate 12 months period.

PATCH TESTS

In any investigation dealing with the physiologic actions of cosmetics, obviously the prime consideration has to do with serious systemic action after entry by inhalation or skin absorption. A second, but still essential consideration involves primary skin irritation, sensitization, and eye irritation. Primarily this section is devoted to results from patch and scratch tests, chiefly on humans, but including minor inquiry dealing with animals through means of patch and scratch tests, together with casual observation during and after exposure to vapors.

The patch tests were carried out through well-nigh standardized procedures with duration ranging from 1 hour through 96, with application diversely to forearm, back and thigh, with blonds, brunettes and Negroes participating, with representation from ages 21 to 60.

PRELIMINARY EXAMINATIONS:

In the year 1942, it was hoped that thioglycolic acid itself, in concentrations sufficient for hair waving, might prove to exert no harm on the skin of humans or animals. Accordingly, with it we carried out 294 skin tests on humans and 68 on rabbits. In addition 63 human skin tests involved needle scratching or sand papering. Likewise, some of the animal skin work involved abrading and needle scratching. Embraced within this period was work dealing with thioglycolic acid in concentrations up to 11 per cent. Some of the preparations utilized contained divers wetting and other auxiliary agents. A limited number of experiments led to the application of thioglycolic acid in varying concentrations to the conjunctivae and corneas of rabbits. Similarly, in a few animal experiments thioglycolic acid, as such, and with adjuvants, was introduced as a mixture into a gassing chamber containing rabbits.

From this preliminary work it was established that thioglycolic acid is a primary skin irritant in relatively low concentrations (circa 2.8 per cent); that it is more damaging to the broken skin; that conjunctivae and corneas may be damaged by direct contact; that rabbits are less responsive than humans. Thioglycolic acid, as such, was deemed to be unsuited to the intended use, and a shift to thioglycolates was instituted.

In four locations (hospitals and one college) 1129 patch tests were carried out, utilizing chiefly aqueous, buffered sodium thioglycolate, stabilized or unstabilized, but in addition higher percentages of thioglycolate in cream form (two percentages) and finally thioglycolic acid in 4.6 per cent strength, which strength is higher than that leading to the buffered sodium thioglycolate as commercially applied. In these tests the lowest content of the thioglycolate was that derived from an original concentration of thioglycolic acid 3.52 per cent (by weight of final product). The total number of tests, 1129, embraces 162 later referred to in a section devoted to sensitization. The contact period ranged from 4 to 97 hours (one, 9 days).

Little gain would arise from detailed tabulation of results by concentration and results by hours of exposure. Instead the entire lot of findings are reduced to a series of summarizing statements.

1. No single patch test with buffered sodium thioglycolate (based on 3.52 per cent thioglycolic acid), stabilized or unstabilized, proved positive as a result of contact periods from 4 to 96 hours.

2. No single patch test with buffered sodium thioglycolate (based on 4.6 per cent thioglycolic acid) proved positive under 24 hours, but for longer exposures occasional positivity may arise.

3. Patch tests with the hydrochloric acid type of neutralizer (diluted as for use) gave rise to no positive responses.

4. Patch tests carried out with buffered sodium thioglycolate, after aging for an excess of 12 months, was slightly more irritating, as shown through patch tests of long contact period, than other solutions of recent manufacture, but the formulation, while similar, was not identical.

5. Based on animal experimentation, it is believed that thioglycolate solutions constitute definite irritants for conjunctivae and corneas.

6. Thioglycolic acids, as such, in 4.6 per cent (aqueous solution) induced positive responses from the 4 and 6 hour contact periods.

7. Thioglycolates in cream form up to 7.13 per cent induced no positive reaction from 4, 6, and 9 hour contact periods, but results from longer periods are shown in Table II.

8. In another series of patch tests with the same material as (7) above and an additional one slightly modified, 197 patch tests were performed in identical manner. From this group 10 positives derived but none at or below the 24 hour level. For each of the two substances five positive reactions appeared but only after 48 or 72 hours of contact.

9. Forty-four patch tests of 24 hours duration utilized four commercial cold wave solutions purchased at random and believed to represent ammonium thioglycolate. Within this number three were positive, two for one product and one for another.

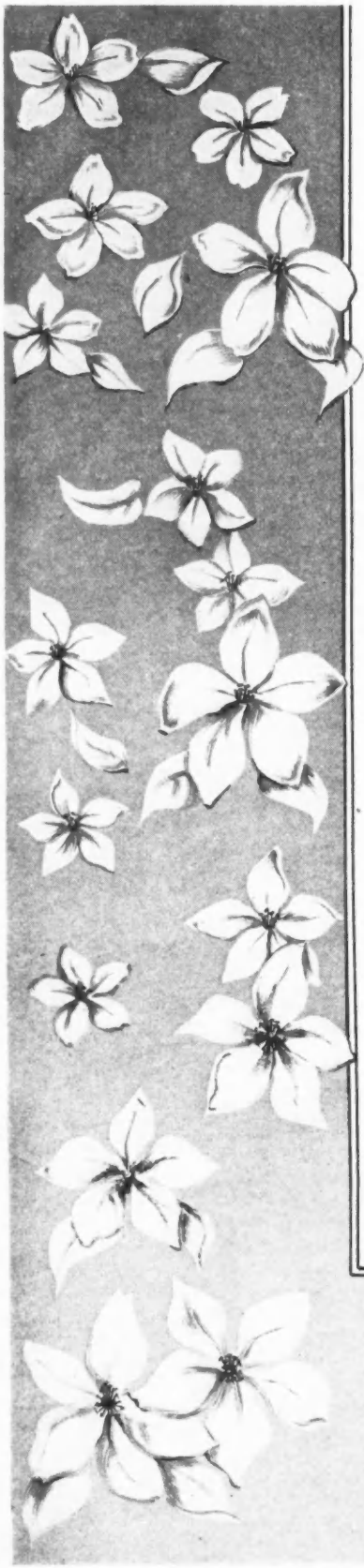
THE PROSPECTS OF SENSITIZATION

Apparently individuals may become sensitized to almost any substance. Some substances possess high allergenic properties while others are correspondingly low, and a few are devoid of proved capacity to establish the state of allergic sensitivity. In many instances, including the present one, the desideratum is to establish the level of allergenic capacity. Accordingly, repeat patch tests have been carried out on 162 persons at varying elapsed times after the initial test. The foremost period was from 7 to 10 days after the initial test. This method of appraisal of allergenic activity was discussed[5] in a publication by Grolnick. In the

TABLE II

Results from Patch Tests 7.3 per cent Sodium Thioglycolate (Cream Form), Prolonged Exposure

NUMBER	CONTACT TIME (hrs.)	No. POSITIVE	%
182	24	16	8
51	48	7	13.7
14	72	2	14.3
12	96	7	58.3



Jasmin Supreme

from

TOMBAREL FRERES, Grasse

—the same Dependably Fine Product as Always—

IS AGAIN AVAILABLE

Since supplies are somewhat limited, we suggest early anticipation of your needs

ALSO AGAIN AVAILABLE

CASSIE SUPREME

ORANGE FLOWERS SUPREME

ROSE SUPREME

TUBEROSE 22

ORRIS CONCRETE

OAKMOSS PRODUCTS, etc.

Tombarel

PRODUCTS CORPORATION
L. J. ZOLLINGER, PRESIDENT
12 EAST 22nd STREET, NEW YORK 10
CHICAGO—A. C. DRURY & CO., INC.
219 EAST NORTH WATER STREET

present work a few persons have been tested at intervals over a period of three years to a total of 25 tests for a number. As a feature of this exploration, some retests have been applied at the same site as the original, others at remote sites. This presentation does not invade the controversy as to local sensitivity versus total body sensitization. While the primary tests sometimes were kept in place for a duration up to 97 hours, all retests were limited to 24 or 48 hours, since allergic responses customarily appear within that duration.

Of 162 retests, no one led to a positive response in the absence of a like initial response. The percentage of positives from re-tests is slightly lower than that for the original series. This is interpreted to mean that at their worst thioglycolic acid and thioglycolates (such as tested) are low in allergenic capacity. It may be conceded that the possibility exists, and further that through cross or group sensitization, reactions might occur related to all manner of sulphur compounds. No such cases have been observed.

SYSTEMIC EFFECTS ON ANIMALS

For the purposes of determining organic damage of thioglycolic acid and certain thioglycolates, subcutaneous implantations were made in rabbits and rats representing various amounts and modifications of thioglycolic acids and thioglycolates. In due course blood examinations were performed, urine analyses, observation of the animals over a period of weeks, followed by sacrifice of the animals, and gross and microscopic organ appraisal. The volume of results necessitates a subsequent publication. The intent here is only to indicate the trend of findings from work not yet complete, which eventually will embrace intravenous and inhalational introduction. Four ml. per kilo of body weight of 10 per cent (volume) of thioglycolic acid irregularly leads to the death of animals about 16 hours subsequent to the injection. This was true of deep muscle injections as well as for subcutaneous ones. When one ml. of respectively 5 and 2.5 per cent thioglycolic acid (84 per cent) was injected daily for longer periods, such as 20 days, marked ulceration appeared at the point of injection. These sloughs did not appear from the injection of thioglycolates. From incomplete returns from pathologic examinations, it does not appear that any examined organs exhibit evidences of severe damage.

It is here noted that Brunschwig, Johnson and Nichols[6] demonstrated that in rats marked protection against hepatic injury of carbon tetrachloride was furnished by the concurrent introduction of sodium thioglycolate.

EFFECT OF ALKALINE MERCAPTANS

In the absence of direct examination of such properties the manufacturer of the investigated product has furnished the results of extensive inquiry here epitomized. An apparatus was provided which determined the weight required to break a single hair, and the amount of stretch occurring prior to the hair rupture. This apparatus was utilized in connection with hair before cold waving, hair immediately after cold waving, and hair at a later period, such as after 30 days. For every subject several hairs were tested, but all results were reported as averages. It was established that all solutions representing both thioglycolates and monoethanolamine thioglycerol tended mildly to decrease tensile strength and to increase elasticity. In some instances the effect on the elasticity was more pronounced at the end of 30 days than immediately after application. However, the total results are such as not to create any state precluding further use or indicating hair damage.

This same manufacturer directed an inquiry as to the action of various permanent wave materials on the structure of the hair during the contact period and some hours after the time of the first application, that is, after the complete removal of the active substance. Four classes of substances were investigated: (a) thioglycolates, (b) substances like monoethanolamine thioglycerol, (c) 10 per cent ammonium carbonate, (d) the heat type of home permanent wave solution. It was concluded that the thioglycolate type of cold wave solution exerts no final effect upon the hair structure, although during the contact period definite alteration of the cell structure of the cuticle occurs. From the monoethanolamine thioglycerol type it was noted that in the final results the hair surfaces are rough, the cuticle cells remain swollen and the surface platelets are somewhat elevated. Class (c) evidenced prompt swelling and the platelets lifting after 60 deg. C heating. The machine-type of permanent waving substances are credited with a final result in which the hair surface is rough and the cuticle cells appreciably swollen and to an extent greater than in the case of the cold wave solution. While none of these reactions are sufficient to justify condemnation of all permanent waving, they do serve as an indication that all permanent waving involves deviation from the normal hair state.

PROTECTION FOR THE BEAUTY SHOP OPERATOR

For the purpose of safeguarding the persons most exposed to thioglycolates along with divers substances possibly more harmful, a number of recommendations are now introduced:

1. The product or products selected for use should be limited to those well established as standardized and not subject to possible mishaps of haphazard formulation.

2. All operators should wear surgical gloves in connection with the application of various beauty shop chemicals, including thioglycolates, neutralizers, fixatives, etc.

3. Since some cold wave preparations retain offensive mercaptan odors to the point of discomfort but not damage to health, it may be necessary that exhausts be installed for air dilution.

4. Beauty shop operators with skin diseases on exposed areas particularly should avoid contact with various substances common to beauty shops, and including thioglycolates, neutralizers, fixatives, etc.

5. In the presence of skin diseases with characteristics suggesting contact dermatitis or sensitization, patch tests should be carried out by a physician in order to determine the exact agent responsible. This is a general statement and without specific reference to cold wave preparations. After the establishment of the precise cause of such affection avoidance of direct contact with that substance may be sufficient to escape perpetuation of the skin condition, but on rare occasion proximity of the offending substance from use by others may prove to be injurious.

6. While it is likely that thioglycolic acid, as such, will not be introduced into beauty shops, it should be recognized that this agent is distinctly harmful, with prospective damage increasing with the percentage of the thioglycolic acid.

You can depend on it!

When manufacturing, processing, or purchasing basic perfumery raw materials our prime objective is always to produce or secure the finest possible qualities.

The essential oils, natural flower oils, fine aromatic chemicals, isolates, animal fixatives, balsams and other basic materials which we offer for sale are the same uniform, high quality products which we use in our fine perfume concentrates.

The prices quoted are always commensurate with the fine quality of the products.

We invite your inquiries!

COMPAGNIE PARENTO

INCORPORATED

CROTON · ON · HUDSON, NEW YORK

NEW YORK · CHICAGO · DETROIT · LOS ANGELES · SAN FRANCISCO
SEATTLE · PHILADELPHIA · TORONTO · MONTREAL · LONDON, ENGLAND

7. Since the work of beauty shop operators necessitates almost endless washing of hands and arms, and equally frequent contact with water in connection with customer needs, all operators should make use of frequent applications of water-impervious creams, although this may not be necessary if surgical gloves are worn.

SUMMARY

The physiologic properties of thioglyconic acid and thioglycolates have been investigated, foremostly in relation to cosmetic use. This report is concerned with the chemistry and physics of hair waving, primary skin irritation, the prospects of sensitization, the extent of instability of thioglycolic acid and thioglycolates, stabilization, systemic action after subcutaneous introduction, and direct action on the hair. The conclusions reached are:

Thioglycolic acid in relatively low concentrations is toxic and may induce necrosis from subcutaneous implantation.

Sodium thioglycolate when free from thioglycolic acid, in concentration approximating 4 per cent in contact with the skin for 4, 6, 9, 24, 48, 72, and 96 hours has not produced demonstrable damage.

Ammonium thioglycolate, commercial preparations of unknown concentration, but designed for identical application, induced skin injury (7.4 per cent frequency) at the 24 hour contact period but not for 4, 6 or 9 hour periods.

Sodium thioglycolate in concentrations approximating 7 per cent provoked skin irritation at and above the 24 hour contact period.

These conclusions derive from 1129 patch tests applied to humans.

The allergenic properties of both thioglycolic acid and thioglycolates as measured by repeated patch tests were appraised as low or non-existent.

The total quantity of hydrogen sulphide arising after induced decomposition of either thioglycolic acid or thioglycolates is insufficient to produce systemic poisoning.

Stabilization of thioglycolic acid and thioglycolates to prevent the appearance of hydrogen sulphide (or not more than mere trace) is practical.

Thioglycolates exert some action on hair tensile strength, elasticity, and cellular state, but the degree of such does not preclude use.

Continuing exposure for professional beauty shop operators, to thioglycolates and other cosmetic chemicals requires a program of protection, unnecessary in occasional household use.

[8] *Industrial Medicine*, 14:7, 595, July, 1945.
[9] *Proc. Soc. Exptl. Biol. Med.*, 60:388, 1945.

Book Reviews

MARKETING DRUGS AND COSMETICS by Louis Bader, Ph.D. and Sidney Picker, M. C. S. 342 pages, 25 tables, 5 charts, 6¼ x 9¼ inches, green cloth covers. D. Van Nostrand Co., 1947, price $5.

This volume is a specialized treatment of the marketing of drugs and cosmetics and contains much useful material, particularly the statistical data. While it contains little in the way of information that has not been published at some time in the various advertising, trade or other publications and government reports, the data is selected and organized for ready reference and application. Unfortunately there are omissions of important material which the reader would normally expect to be included in a work of this sort. Even the beginner who wants to have an answer to such a practical and fundamental question as trade discounts—what percentages off the list prices of cosmetics are customarily allowed to the retailer, to the wholesaler and to the sales representative—will find his question unanswered. Likewise the trade discounts customarily offered by the drug and pharmaceutical houses and how they operate, are omitted. Further, the whole trend toward simplification of trade discounts, deals and other allowances, which has resulted in some recent basic merchandising changes by the larger bellwether companies doesn't seem to have been sensed by the authors. The merchandising of foreign perfumes involving as it does unusual and important factors, is completely ignored—and after all foreign perfumes do make up a sizable segment of the cosmetic business in the United States. The special factors involved in the marketing of domestic perfumes are also omitted. There are other lapses but on the whole the book is a good elementary treatment of the merchandising practice in the allied industries.

There are 21 chapters covering such subjects as the market, the product to be produced, competition, drug store marketing, packaging, dealer types, trade practices, organization of a marketing division, developing market plans, combination sales, methods of obtaining dealer cooperation, sales promotional efforts, combination and premium offers, advertising drug store products, displays, merchandising ethical products, price legislation, financing, the export market, necessity for marketing research and government regulation. Questions at the end of the volume are of value to the classroom student.

As to the authors, Dr. Bader has been a professor of marketing at the New York University for over 20 years and is the author of several books and many articles on business and economics. Mr. Picker, the co-author, was formerly associated with the Crystal Chemical Co., no longer in business, the old Trece Laboratories and Miner's, Inc., from which most of his practical experience was obtained.

YOUR HOME COURSE TO HEALTH, BEAUTY, CHARM by Edyth Thornton McLeod. 66 pages, profusely illustrated with photographs and drawings, 8 x 10½ inches. Archway Press, 1947, price, heavy paper covers, 50 cents; cloth, $2.

Again the author is furthering the intelligent use of beauty aids in an easily understood, a graphic and a practical way in this interesting volume. The outstanding feature of the book is the lavish use of illustrations accompanied by friendly, chatty text. There are over 100 photographs and drawings all of which definitely illustrate the text which is divided into three main divisions: health, beauty and charm; and each is developed in an original way that is bound to appeal to women.

WITH TEEN-AGER PERFUMES

Manufacturers in every field recognize the teen-ager as a market on its own. The young modern does her own buying, formulates her own opinions, is at her most impressionable. The Dreyer Perfume Stylist has created a crisp, gay group of scents much-in-demand by the coke crowd. If you prefer your own, he will develop a perfume group exclusively for you.

ASK FOR: THE FRENCH-TYPE BOUQUET • MODERN BOUQUET
FLORAL • COLLEGE • SPECTATOR SPORTS • FROSH

P. R. DREYER INC.
ESSENTIAL OILS • AROMATIC CHEMICALS
PERFUME COMPOUNDS • FLAVORS

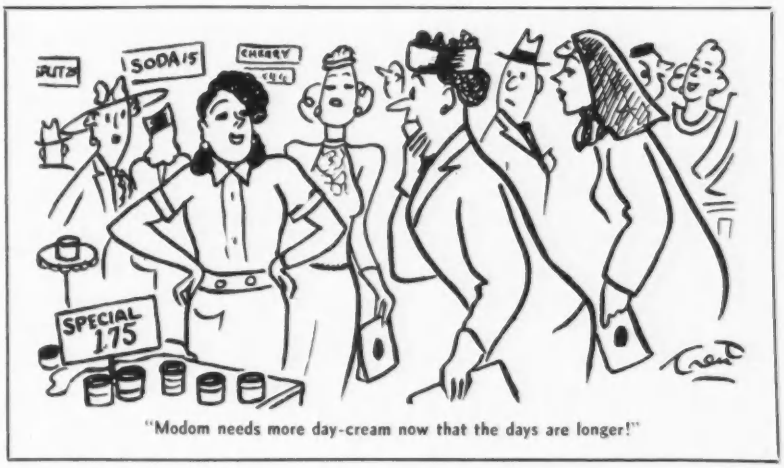
119 WEST 19th STREET • NEW YORK 11, N. Y.

BOSTON . . HAROLD H. BLOOMFIELD
CHICAGO . . . WM. H. SCHUTTE CO.
CINCINNATI . WM. G. SCHMITHORST
DETROIT . . . . . L. H. CARLSON
LOS ANGELES . . ALBERT ALBEK, Inc.
PHILADELPHIA . . . . R. PELTZ CO.

THOMPSON-HAYWARD CHEMICAL CO.
KANSAS CITY
AND CITIES THROUGHOUT MIDDLEWEST
MEXICO . . . . . EMILIO PAGUAGA
PRINCIPAL CITIES IN SOUTH AMERICA

Short Adages

by R. O'MATTICK



"Modom needs more day-cream now that the days are longer!"

"$20.00 and Not One Scent More" is the heading of an item that appeared in the press recently. A wondrous machine to fill movie theatres with fragrances to match the theme of the picture has been seized by the U. S. Customs and put up for auction at the office of the Appraiser's Stores. When the lone bid of $20.00 was offered, the Customs withdrew the gadget as the catalog claimed that this machine was worth at least $2,000.00.

Mr. A. Goodbuy states that he would bid more than $20.00 if the U. S. Customs could show him beyond the aroma of a doubt how this contraption produces fragrance to match the theme of a motion picture.

* * *

Most pictures, according to him, have themes so worn and so badly handled that no fragrances, not even those of newly made civet tincture, would possibly match the plot. (Hollywood please copy).

* * *

We saw over 2000 persons at the T.G.A. Convention who bid their $20.00 for the three luncheons at the Waldorf. It was quite an affair, as it always is. Inasmuch as all the Proceedings are or will be duly recorded in the more serious sections of THE AMERICAN PERFUMER, there is little for us to say about this Convocation except to report a minor item here and there for the benefit of those unable to attend.

* * *

Pat Chouli and his equally frivolous friend Sand L. Wood were present, strange as it may seem, at every one of the Sessions of the Scientific Section whereas Dr. Rowmateral, the world-renowned Perfume and Cosmetic Chemist and Expert was only in evidence at all the various liquid bars which the Waldorf houses. Whether Pat and Sand were on the alert for some chemist hearing the involved Scientific Reports, who might be needing a pound or two of some Essential Oil or Aromatic or whether they just sat through the lectures to rest or to show that they were up on things is most difficult to establish. They both assured us that the Proceedings were a bit on the complicated side but all very interesting. However, they are the very same gentlemen who assured us that there will be no Oil of Lemon available until the end of 1958.

* * *

There was little talk about the State of the Union (we don't mean A. F. of L. or C. I. O. but U. S. A.) or about business conditions in general. These topics have already been thoroughly gone over at previous gatherings. The boys all looked hungry and hopeful but they talked about Durocher and the Dodgers and about fishing rather than the prospects ahead in Perfumes and Cosmetics.

We seldom mention in this column the name of anyone, no matter how prominent, who is not a duly recognized and regular contributor to this Department but an exception must be made in the case of Mr. Herman L. Brooks. He has fought and is still fighting valiantly for the principle (which should be an axiom) that advertisements for toilet preparations be divorced from other advertising. The policy may be stated best in his own words: "I do not think that advertising a bottle of perfume or any toilet preparation next to an electric heater or hot water bag is very conducive to the glamour that must constantly surround products of our kind."

* * *

When will the members of our Industry wake up and do something about it? If they don't watch out someone will be offering one bottle of Eau de Cologne Romance with two bottles of Misbopeplo-Hydrochloride, all for one dollar!

* * *

Among the many welcome publications, bulletins, leaflets, etc., that find their way to our *desk* (believe it or not the Boss gave us a *desk!*) one of the most welcome is the monthly called *Edin*, issued by the Toilet Goods Manufacturers Association of Canada. The goings-on north of the border are well written and arranged in this bulletin.

* * *

Members of the Essential Oil and Aromatic Industry are accustomed to receive all sorts of requests for perfuming anything and everything, for similating every and any kind of aroma, for masking and covering the odors of whatever has an odor. But a recent letter from an enterprising part of the United States tops the top-note: "We are looking for an odor that will smell like the odor one gets from a new automobile, that is an odor that will convey the impression of leather, lacquer and the other smells coming from an automobile as it stands in the show-room ready to be sold."

* * *

Well, ye great miracle workers of tinctures and resins and terpeneless oils and terpenes and tails and heads and the middle-fractions! Where is your magic? Why not make an old car smell like new—even if it runs wobbly or possibly not at all?

Time for a

Spring Check-up . . .

on the plan that delivers Peace of Mind

THANKS to the work of patriotic volunteers, the U. S. Savings Bonds program has carried America a long way up the road to economic security.

During 1946, in spite of all the problems and uncertainties the nation faced, sales of Savings Bonds *exceeded redemptions* by $1,389,216,000. The success of this great sales operation has helped stem the tide of inflation, has reduced public debt holdings of the banking system, and has given millions of citizens a stake in their country and a profitable investment in their own futures.

Yes, we've come a long way—but the trip isn't over! Now is the time to check up on your Payroll Savings Plan. Make sure that all your new employees are familiar with its advantages. Remind *all* your employees that there's no easier, surer way to build their own futures—and America's—than by buying Bonds regularly through the Payroll Savings Plan. Every $3 invested pays $4 at maturity!

For any help you need in conducting the Payroll Plan, call on your State Director of the Treasury Department's Savings Bonds Division.

New Savings Bonds Plan won't affect the P.S.P.

SOON the Treasury Department and the banks of America will make it possible for farmers, doctors, and other self-employed people to participate in "automatic" Bond buying by special arrangement with their banks. This extension of the Savings Bonds program is not a partial payment plan and is intended *only* for people who are not in a position to take advantage of the Payroll Savings Plan.

The Treasury Department acknowledges with appreciation the publication of this message by

The American Perfumer & Essential Oil Review

This is an official U. S. Treasury advertisement prepared under the auspices of the Treasury Department and The Advertising Council.

FLAVORS

Preparation of Caramel

Caramel is both a flavor and a color having wide application in the food and beverage industries

MORRIS B. JACOBS, Ph.D.*

AS pointed out in a previous paper, caramel is defined as a concentrated aqueous solution of the product obtained by heating sugar or glucose until the sweet taste is destroyed and a uniform dark brown mass results, a small amount of alkali, alkaline carbonate or a trace of mineral acid being added while heating.[1] It is known, however, that caramel is obtained by heating products other than sucrose or glucose, such as molasses, soy bean carbohydrate and similar materials. Hence it is clear that since the sources of caramel are different, different methods are used for its manufacture. Several examples of the preparation of caramel from different source materials will make this apparent.

MANUFACTURE

Sucrose.—A caramel can be made from sucrose merely by heating it above its melting point, 186 deg. C., but below the point at which it chars. Such a method is inadequate for commercial production. A relatively simple formula is to heat 100 pounds of simple sirup to boiling, add about 150 grams of 28 per cent ammonia water while mixing the batch, and add an aqueous solution of ammonium carbonate containing 250 grams of the salt. The heating is continued until a temperature in the range of 350-450 deg. F., (176.6-232 deg. C.) is obtained.

An alternative method is to heat a solution of sugar in concentrated ammonium hydroxide solution under pressure at 105-120 deg. C. Any volatile products formed in the process may be removed subsequently by passing steam through the product. Pressure may be released and reapplied in the processing step.

Specific recommendations for the preparation of caramel have been given by Leopold[2] and by Sollich.[3] The former investigator found that it is best to heat the sugar at 187 deg. C. for 16.5 minutes and that longer heating causes the development of a bitter taste. The latter investigator found that partial concentration could be done in an open vessel but final concentration was best performed *in vacuo*. Still another recommendation[4] is to heat sucrose at 210 deg. C. It is known that unrefined sucrose caramelizes much more readily than refined sucrose. This is attributed to the mineral content of the unrefined product.

Raw Sugar or Molasses.—One method of preparation using these source materials follows the procedure outlined below: Dilute the raw sugar solution or the molasses and allow to stand until virtually all the suspended material has settled out. Invert the sucrose with sulfurous acid and remove the excess sulfur dioxide by boiling for 0.5 hour. Neutralize with lime and filter. Boil the filtrate cautiously using a vessel equipped with a steam coil. Replace the water lost during boiling and continue the process until a product of adequate coloring power is obtained. Evaporate to a viscous consistency.

Starch, Dextrin, and Glucose.—Caramel may be prepared from starch by several methods. In Europe a common procedure is to dampen powdered starch with dilute sulfuric acid. The batch is heated to 100-120 deg. C. and

* Adjunct Professor of Chemical Engineering, Polytechnic Institute of Brooklyn.

HENRI ROBERT INC.

News of Importance to AMERICAN PERFUMERS
Who Want Success Through Quality

HENRI ROBERT Inc.

Distinctive American raw materials for perfumes . . . in the French tradition

39 WEST 60TH ST., NEW YORK 23, N. Y.

CABLE ADDRESS HENROBERT TELEPHONE: CIRCLE 5-8521 CODES: A.B.C. 5TH & 6TH EDITION

announces:

He is now the exclusive representative in the Western Hemisphere for:

SYNAROME
S A R L au Capital de 1 000 000 de Francs

LABORATOIRES SYNAROME
Asnieres (Seine)
CREATOR OF AMBRAROME, CARDAMINE AND OTHER VERY MODERN SPECIALTIES USED IN MANY LEADING SUCCESSES DURING THE PAST DECADE

LES FILS DE
JOSEPH ROBERT
91 RUE DE L'UNIVERSITÉ
PARIS VII
SPECIALISTS IN FLORAL PRODUCTS
FROM GRASSE
ESSENTIAL OILS AND ABSOLUTES OF EXCEPTIONAL QUALITY MANUFACTURED FROM THE PRINCIPLES ESTABLISHED IN 1890 BY JOSEPH ROBERT

HENRI L. ROBERT
CREATEUR DE PARFUMS

WILL PERSONALLY HELP YOU UTILIZE THESE THREE SOURCES OF OUTSTANDING RAW MATERIAL AND ENABLE YOU TO DEVELOP MODERN PERFUMES OF BEST QUALITY AND HIGHEST SALES APPEAL.

is held at that temperature until hydrolysis of the starch and dextrin to glucose is complete. This may be checked by the addition of 95 per cent alcohol to a solution of a sample of the batch. A clear solution indicates complete hydrolysis; a turbidity indicates the presence of dextrins. Calcium carbonate is added to neutralize the sulfuric acid. The mixture is allowed to stand; the clear supernatant liquid is decanted from the precipitated calcium sulfate; it is concentrated to 36 deg. Bé.; and is filtered. After transfer to a vessel, the hot filtrate is heated to boiling while being stirred. Sodium carbonate is added in the ratio of 3 parts to 100 parts by weight of the batch and after the color deepens, the heat is reduced gradually to avoid carbonization. Partial cooling is accomplished by addition of hot water. The caramel is extracted with water, filtered, and then diluted to provide several grades of color.

In an alternative procedure[5] of preparing caramel from starch, the starch is saccharified by heating with dilute hydrochloric acid under pressure. The sugar obtained is subsequently heated at 120-130 deg. C. with a catalyst such as ammonium carbonate, ammonium sulfate, ammonium chloride, aluminum sulfate, or calcium chloride.

In one process the caramel is made directly from dextrin[6] without conversion to glucose. The starch is converted in customary ways to dextrin and the latter is caramelized directly in the presence of ammonia or other alkali.

Di Baja[7] made a *caramel paste* from glucose by hydrolyzing potato and corn starch in an autoclave with dilute acid. He stressed the importance of quality in the glucose used, recommending 41 per cent as the minimum *D*-glucose content required in such commercial glucose.

Malt.—Malts are specially prepared to provide caramel coloring. Ordinary malt is given an additional processing by steeping, drying, and heating until it is adequately caramelized. The color of these products ranges from yellowish-brown to a blackish brown, the latter being produced by high temperature drying. In this instance the principal sugar being caramelized is maltose.

Lactose.—While this sugar has not been used to any great extent for commercial caramel production it is to be noted that it loses water of hydration at about 130 deg. C. and while melting at 200 deg. C. undergoes caramelization at 160-180 deg. C.

Soybean Carbohydrate.—The crude stachyose[8] obtained from the by-products in the extraction of soybean oil by alcohol can be hydrolyzed with dilute hydrochloric acid; the acid concentration can be reduced to pH 2-3 and then the material can be dehydrated by heating at 130 deg. C. While crude stachyose could be used, a commercial caramel could not be prepared by this investigator by the direct heating of stachyose.

Instead of using crude stachyose the lower layer of soybean oil foots, after treatment with acid can be used for it is rich in sugars.[9] This layer is filtered and heated at 130 deg. C. The caramel solution is neutralized with sodium hydroxide to a pH 6.0-7.0. The bitter taste of the caramel preparation was removed by the addition of a small amount of alcohol or by the addition of disodium

Have you a **COLOR PROBLEM?**

LET US SOLVE IT!

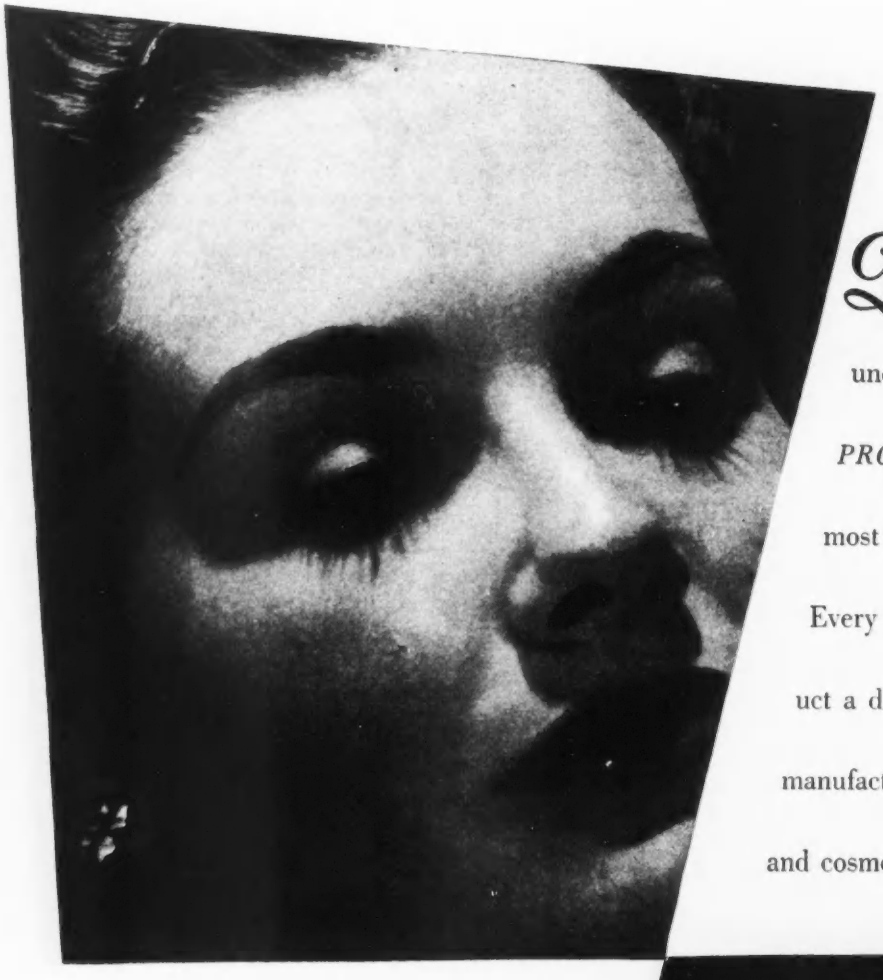
F. D. & C. Certified Food Colors for Flavoring Extracts, Flavors and all other food products.

Eastern Representatives of Wm. J. Stange Co., Chicago, Ill.

LEEBEN CHEMICAL CO., Inc.

Successors to H. LIEBER & CO., Inc.
389 Washington St., New York, Tel.: WAlker 5-0210-0211

Also—
D. & C. and Ext. D. & C. Colors for Perfumes, Soaps, Shampoos, Bath Salts, Toilet Preparation Compounds, Nail Polish, Wave-set, Permanent Wave Lotions and Cosmetic Stockings.
SAPONINE
—the perfect foam producer
CARMINE NO. 40



QUALITY based on unceasing research . . . *PRODUCTION* under the most exacting control . . . Every *SYNTOMATIC* Product a distinctive asset in the manufacture of your perfumes and cosmetic preparations.

AROMATICS

ESSENTIAL OILS

PERFUMERS MATERIALS

SYNTOMATIC CORPORATION

114 EAST 32nd STREET • NEW YORK 16, N. Y. • MURRAY HILL 3-7618

hydrogen phosphate, monosodium dihydrogen phosphate, or trisodium phosphate.

CARAMEL POWDER

To prepare a caramel powder the following procedure may be employed. Decrease the viscosity of the caramel by adding sufficient water to make the total solids content of the mixture 60 per cent. Reduction of viscosity can also be achieved by heating the caramel to approximately 85 deg. C. The fluid can then be spray evaporated[10] at 40-60 deg. C. with preheated air.

A caramel powder mixture[11] for use in foods can be made by taking dry, finely powdered caramel and mixing it with sufficient sugar so that it will not cake when the mixture is kept in a dry, air-tight container under commercial storage conditions.

The time and temperature of heating sugar masses containing water and an alkaline substance, can be arranged so that caramelization and evaporation to dryness occur simultaneously.[12]

UTILIZATION

Caramel is used widely as both a flavor and coloring agent. A principal use is in *imitation vanilla flavor* where it is commonly employed in the ratios of 7 to 10 parts of caramel per 1000 parts of total ingredients. At other times caramel is added to suit the taste of the processor. This practice is undoubtedly attributable to the desire to obtain a product looking like natural vanilla flavor but undoubtedly the caramel adds a note of its own.

Caramel made from starch by the sulfuric acid method detailed above is commonly used in Europe for coloring *alcoholic beverages* such as beer, brandy, and high wines. An equally common practice is to use caramel color in rum. Indeed virtually all rum from Jamaica is colored with caramel. For coloring beer and wine it is not necessary to free the glucose, used as the raw material, completely from dextrin. In addition ammonium carbonate may be used as the alkali instead of sodium carbonate.

Caramel malts are used for coloring whiskey, beer and sometimes vodka. Caramel, however, is employed not only in alcoholic beverages but also in *nonalcoholic beverages* like soda pop.

In addition to its use for the products mentioned above caramel is often used for coloring puddings, cakes, sirups, ice cream and certain medicines.

[1] *National Formulary*, 8th ed. 1946.
[2] Heinrich Leopold and Edith Wagner, *Z. Untersuch. Lebensm.* 83, 487 (1942).
[3] R. Sollich, British Patent 359,634 (1930).
[4] Morris B. Jacobs, Ed. *Chemistry and Technology of Food, and Food Products*, Vol. I, p. 28, Interscience, New York, 1944.
[5] Pei-Sung King, *Ind. Center* (China) 3, 319 (1934).
[6] Otto Jungfer, German Patent 582,039 (1933).
[7] Attilio Di Raja, *Requind* 1, 52, 74 (1932).
[8] Yosabura Iwasa, *J. Agr. Chem. Soc. Japan* 14, 1512 (1938).
[9] Yosabura Iwasa, *J. Agr. Chem. Soc. Japan* 15, 473 (1939).
[10] Franz Kretzdorn, German Patent 704,809 (1941).
[11] Teresa T. Speed, U. S. Patent 2,019,365 (1935).
[12] N. V. Buisman's Gebrande Suikerpoederfabriek, Belgian Patent 447,958 (1942).

Flavored Notes

In one method of classifying wines, that is according to use, there are five principal classes, namely, Appetizer Wines, Red Table Wines, White Table Wines, Sweet Dessert Wines, and Sparkling Wines. Within these five classes there are twelve distinct flavor types. These are, in accordance with the grouping above, sherry and vermouth; claret and Burgundy; sauterne and Rhine wine; port, muscatel, Tokay and white port; and champagne and sparkling Burgundy. Most of the hundreds of names used for wine can be grouped into the wine-type categories given above. Undoubtedly there are fine flavor distinctions associated with trade name, geographical, and varietal wine names.

* * *

Only a very small amount of alcohol in a product is said to have sufficient effect to inhibit mold growth in products containing relatively high amounts of sugar.

* * *

The Eastern Regional Research Laboratory of the U. S. Department of Agriculture during the war developed a true fruit fresh apple flavor in the form of an aqueous solution. This is very stable and is unlike other commercial apple flavors. The flavor components obtained by heating apple juice are condensed, concentrated from 10 to 150 times and then a water solution is prepared. The skins of the apples and the layers immediately beneath these skins must be protected from damage for most of the flavor components are in these layers. An additional precaution to be observed is to prevent breakage of the apple seeds. This avoids a bitter almond flavor. This apple flavor has been suggested for use in frozen desserts like ice cream and ice sherbet, beverages, fountain syrups, apple jellies, sauces, and confectionery. It can be added to any apple product even apple pie and baked apple to intensify and restore flavor.—*M. B. J.*

F.E.M.A. to Meet This Month

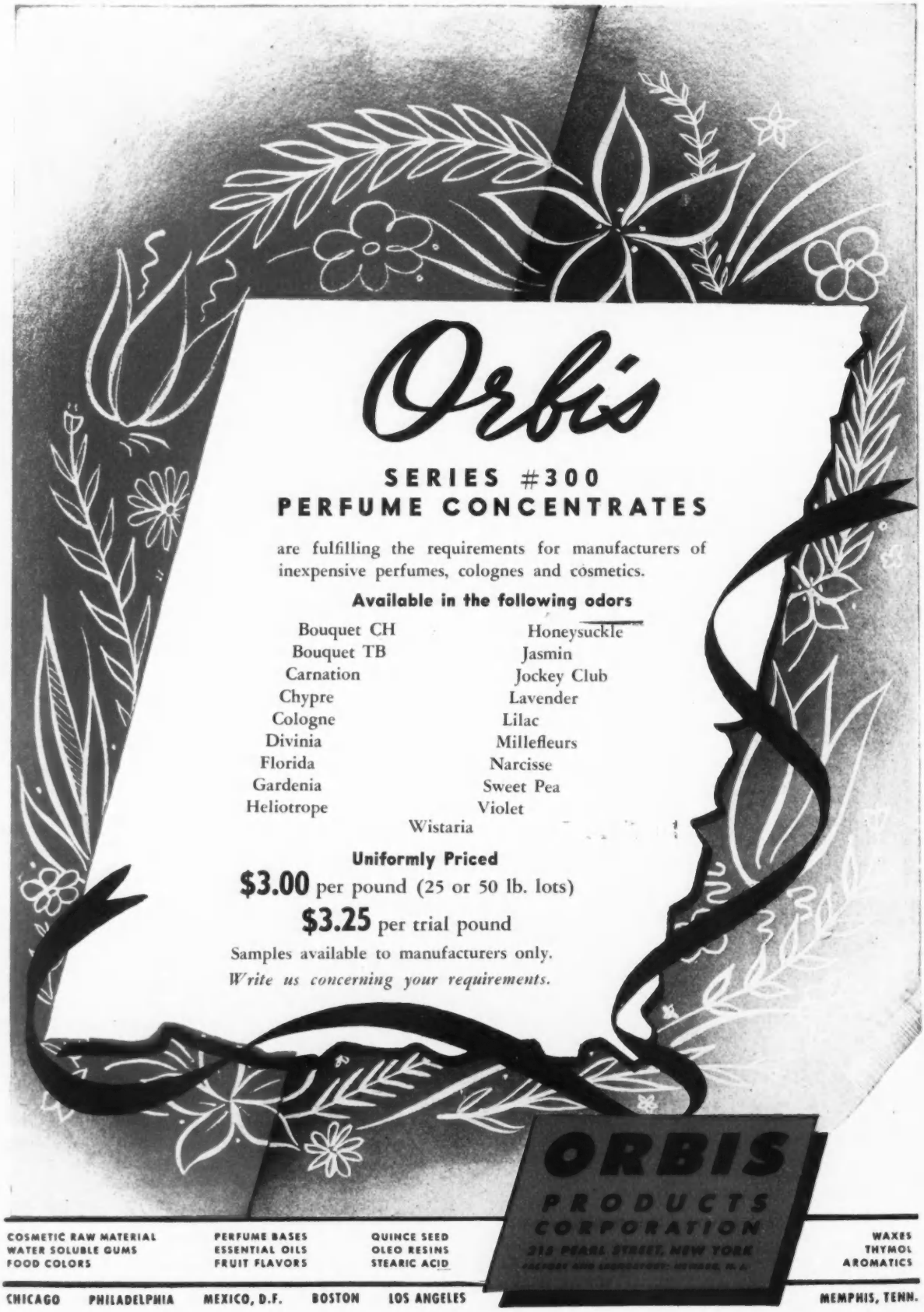
The Flavoring Extract Manufacturers Association is to meet May 25-28 at Atlantic City, N. J., for its 38th Annual Convention.

Among the speakers will be: Ray C. Schlotterer, Ody H. Lamborn, Paul S. Willis, E. C. Crocker and Henry Miller. Many social functions have been scheduled.

Pepper Cultivation, Netherlands Indies

It is estimated that from 3 to 4 years will be required to restore the cultivation of pepper in the Netherlands Indies to its proper proportions. It is reported that in Banka half of the bearing trees were destroyed during the war, to make way for other crops and that tree losses in Southern Borneo amounted to about 20 per cent. The black-pepper areas in the Lampong districts of Sumatra remained inaccessible in 1946, owing to the political situation, and little is known of conditions there.

With the shipment in 1946 of such old pepper stocks as became available after the war and with little new production anticipated in 1947, it is expected that some time will elapse before the pepper trade of the Netherlands Indies equals the average annual exports of 51,850 tons attained during the three prewar years 1937-39.—*Foreign Commerce.*


Orbis
SERIES #300
PERFUME CONCENTRATES
are fulfilling the requirements for manufacturers of inexpensive perfumes, colognes and cosmetics.
Available in the following odors
Bouquet CH
Bouquet TB
Carnation
Chypre
Cologne
Divinia
Florida
Gardenia
Heliotrope
Honeysuckle
Jasmin
Jockey Club
Lavender
Lilac
Millefleurs
Narcisse
Sweet Pea
Violet
Wistaria
Uniformly Priced
$3.00 per pound (25 or 50 lb. lots)
$3.25 per trial pound
Samples available to manufacturers only.
Write us concerning your requirements.
ORBIS
PRODUCTS
CORPORATION
215 PEARL STREET, NEW YORK
COSMETIC RAW MATERIAL
WATER SOLUBLE GUMS
FOOD COLORS
PERFUME BASES
ESSENTIAL OILS
FRUIT FLAVORS
QUINCE SEED
OLEO RESINS
STEARIC ACID
WAXES
THYMOL
AROMATICS
CHICAGO
PHILADELPHIA
MEXICO, D.F.
BOSTON
LOS ANGELES
MEMPHIS, TENN.

SOAPS

Lever Launches Soapless Detergent

Lever Brothers Co., Cambridge, Mass., has entered the soapless detergent field with the launching of "Breeze" in six Mid-Western cities and their surrounding marketing areas.

This step was taken after more than 10 years of research in the company's Cambridge laboratories, and represents an investment of over two million dollars in development, manufacturing equipment and the cost of building additions.

The active ingredients in Breeze is a new detergent which is protected by patents. It is manufactured from a vegetable oil base. Over 100,000 individual tests were made before the product was put on the market.

Plants of Lever Brothers Co. are located at Baltimore, Md.; Cambridge, Mass.; Edgewater, N. J.; Hammond, Ind., and St. Louis, Mo.

A New and Improved "Drene"

Procter & Gamble, Cincinnati, Ohio, has announced new developments in the field of detergent shampoos. These developments have been incorporated in the new and improved "Drene," which is now on the market. Three improvements have been made in the new product—the addition of a "suds booster," an increase in the hair conditioning element, and the blending of a fine perfume. "Drene" was one of the pioneers in the prepared shampoo field when it was introduced in 1934.

Modified Alcohol Sulfate Detergent

Alrose Chemical Co., Providence, R. I., has announced the introduction of a new modified alcohol sulfate detergent, described as a free-flowing, non-sneezing, off-white granular powder with a pleasing soap-like odor. A 0.1 per cent of the detergent, known as Alrosene 31, will produce 3.0-3.5 volumes of foam on shaking at 45 deg. C. Bubbles are small, tough, and soap-like in texture; foam drainage is slow, and stability is said to be good. The detergent shows no reduction of foaming in hard water or in sea water. Aside from industrial and household applications, Alrosene 31 would seem to offer excellent properties for bubble baths.

Fats and Oils Export Allocations

The Department of Agriculture has announced fats and oils export allocations totaling 89,300,000 pounds for the second quarter of 1947. This amount includes 5,100,000 pounds allocated to export claimants in exchange for other fats and oils needed in the United States. For the second quarter of 1946, final allocations totaled 236,100,000 pounds.

The April-June 1947 allocations include (in fat content) 39,700,000 pounds of lard, 4,400,000 pounds of margarine, 22,800,000 pounds of shortening and other edible oils, 11,600,000 pounds of inedible fats and oils and 10,800,000 pounds of soap. Of these exports, only the margarine for French North Africa will be supplied by the Production and Marketing Administration.

Current data indicates stocks and supplies of fats and oils available for consumption in the United States will continue to be short in supply during the second and third quarter of 1947. For this reason recommended second quarter export allocations have been kept at a low level.

Canadian Soap Production

The output of soap in Canada during 1945, the last year for which statistics are available, totalled 133,000 tons, valued at about $29,000,000 (Canadian currency), according to official reports. More than 40 companies comprise the soap industry.

Stanley Holuba Joins Essential Chemicals

Stanley J. Holuba has joined the Essential Chemicals Co., formerly the Soap Division of Hercules Powder Co., as director of research. Mr. Holuba will have charge of an expanding program of research on industrial soap products, and "Fun" soap, a new-type granulated household soap.

Mr. Holuba was formerly with E. I. du Pont de Nemours & Co., Inc., where he did research in synthetic detergents, fats and oils. He also was with the research development and production department of Colgate-Palmolive-Peet Co., engaged in the formulating and spray drying of synthetic detergents, laundry soaps, and general sanitary compounds.

Some World-Wide Soap Reports

Production of soap in Italy at the end of December, 1946, was reported at only 30 per cent of the prewar rate, a low level in comparison with almost all other Italian industries, states the Italian press. This figure included only "qualified" soap plants, and not those established during emergency periods.

Serious difficulties continued in the field of raw materials. Some basic products made in Italy, such as caustic soda and sodium carbonate, continued in short supply. Imports of fats, subject to license, were arriving in Italy in small quantities, some of which were imported by UNRRA, but not for industrial uses.

Only limited domestic production of fats in Italy was reported at the close of 1946. Sulfur-processed olive oil was subject to sales restrictions, and was allocated only for the manufacture of "standardized" soap. Unrestricted fats, such as rice oil, corn oil, olive-pulp oil, dregs oil, tallow, and bone fat were not produced in sufficient quantities to allow the soap industry to produce at full capacity.

The Italian soap market was reportedly undergoing a phase of uncertainty. The possibility of direct Government importation of larger quantities of fats for industrial uses brought about a leveling off of soap prices, according to December reports, although these prices were still high. The soap industry has strongly favored the inclusion of bilateral treaties for the importation of fats, the Netherlands and the British Empire being likely sources of oleaginous seeds and fats. If large imports of fats should be made at relatively low costs, the retail price of soap on the home market might decline somewhat.

PHILIPPINE SOAP IMPORTS

Philippine imports of soap and toilet preparations during the first half of 1946, valued at 10,014,000 pesos, were almost four times the value (2,588,000 pesos) in the entire year 1940. Arrivals of these commodities in the first six months of 1946 were reported as adequate.

The upward trend in imports of soap and toiletries was due in part to the fact that factory production of soap in the Philippines was negligible during the first six months of 1946, whereas before the war most of the laundry soap and some toilet soap was domestically manufactured.

PRODUCTION IN FRANCE

Total soap production in France in September, 1946, amounted to 16,181 tons, compared with 35,860 tons in the corresponding month of 1938, reports the European press. The September, 1946, production of various soap items was as follows, with figures for the corresponding month in 1938 in parentheses: 761 tons of toilet soap (1370 tons); other soap, 3267 tons (19,104); soap powder, 10,466 tons (7540); shaving products, 88 tons (82); industrial products and miscellaneous items, 1599 tons (7764).

NICARAGUA'S IMPORTS UP

An upward trend in the value of Nicaragua's imports of soap was noted during the first 10 months of 1946. Imports in January were valued at $4,952, increasing to $10,170 in June and $11,012 in October. Total soap imports in the 10-month period of 1946 had a value of $84,327.—*Foreign Commerce.*

Fat Salvage Committee Entertains Editors

American Association of Agriculture College editors of the Northeast region, who recently attended a three-day annual meeting in New York, N. Y., were guests of honor at a luncheon given by the American Fat Salvage Committee at the Hotel Waldorf-Astoria. Others attending were food editors and women's page editors of the metropolitan area's leading newspapers and women's magazines; home economists from vicinity universities, and local radio commentators.

J. H. Blakney Directs Purchasing

J. H. Blakney has been made vice-president in charge of purchases for Colgate-Palmolive-Peet Co., Jersey City, N. J. Mr. Blakney joined the firm in 1914, and has been head of the purchasing department since 1934.

Banner Soap Co. Organized

The Banner Chemical & Soap Manufacturing Co. has been organized to manufacture powdered soap at 103 South Third St., St. Louis, Mo., with Clarence W. Wiese as president.

Netherlands Indies Copra

Although copra production in the Netherlands Indies is said to have totaled more than 100,000 metric tons in 1946, and about 20,000 tons were found on hand after the Japanese defeat, only 54,400 tons were exported. Annual shipments immediately preceeding the war averaged about 450,000 tons.

Failure to export large quantities is attributed principally to the shortage of small craft used by the natives in assembling copra from outlying districts at ports where it can be loaded on ocean carriers. There were heavy losses of these small vessels during the later part of the war, and they cannot be quickly replaced. Consequently, the problem of moving 800,000 tons of copra expected to be available in 1947 presents difficulties. It is possible, however that new transportation methods, successfully used in the Philippines under similar circumstances, will help remedy the shipping difficulties in the Netherlands Indies.

In order to stimulate the production and export of copra with which to alleviate the world shortage of fats and oils, the Commodity Credit Corporation in August 1946 entered into a Copra Agreement with the Netherlands Indies government making available to the latter a $15,000,000 credit for purchase of boats, and "inducement goods." Up to the close of 1946, however, little use had been made of this credit.

During 1946 the stimulation of copra production, the purchase of copra from the natives, and its delivery to ocean ports for overseas shipment was in the hands of a government agency known as the "Copra Fund." Although private business, accordingly, did not participate in this trade, it is expected that eventually the copra business will be returned to private channels.—*Foreign Commerce.*

by ARNOLD KRUCKMAN

THE United States Supreme Court on April 14th denied the Elizabeth Arden appeal for a writ of certiorari and remanded the case to the U. S. Circuit Court of Appeals for the Second Circuit in New York. The definition of a writ of certiorari is given in these words: it is an instrument issued by a higher court to a lower court, requiring the lower court to bring before the higher court the record of a certain case which is to be reviewed by the higher court with the thought that there have been errors in the judgment upon which the lower court based its ruling.

ELIZABETH ARDEN CASE

The effect of the denial of the writ by the U. S. Supreme Court is that the order of the Circuit Court stands, and becomes the ultimate decision under the law of the land. In this case, it means that the Federal Trade Commission is legally empowered to proceed to enforce its order in the Elizabeth Arden case, requiring that the defendant cease and desist from using demonstrators, and in employing any other methods to aid its customers in marketing its wares in retail stores and elsewhere, *unless* ALL customers in a similar relation to the firm receive the same benefits. In other words, demonstrators and P. Ms. and other means of pushing sales may be used only if they are used universally, not under certain circumstances and under certain special conditions.

Obviously, the order applies not only in the Elizabeth Arden case but applies to all manufacturers and merchandisers and distributors who employ similar methods to stimulate sales. The Federal Trade Commission officials in Washington say the order as upheld by the Circuit Court of Appeals will now be enforced.

How, when, and exactly under what conditions the compliance will be enforced has not yet been specifically clarified. Legally, of course, the Federal Trade Commission is assumed to require immediate and full obedience to its order. It is interesting, under the existing circumstances, to contemplate the fact that the cosmetic industry will meet in New York, at the Waldorf-Astoria Hotel, with Federal Trade Commissioner Robert E. Freer, on May 12, for a trade practice conference. It is still more interesting that the official announcement of the conference contains this paragraph: "Among the subjects suggested for consideration at the meeting are: prevention of unlawful discrimination in price, advertising and promotional allowances, services or facilities; improper use of demonstrators, subsidized retail salespersons and push money; commercial bribery, fictitious pricing; defamation of competitors or disparagement of their products; imitation of trade-marks and trade names; false advertising; misrepresentation as to character of business; lottery schemes; procurement of competitors' confidential information by unfair means and wrongful use thereof; and aiding or abetting use of unfair trade practices."

The announcement makes clear that the products included for consideration comprise the great variety of cosmetics, toilet preparations and devices or accessories sold in combination therewith. And that the conference will embrace all persons, firms, corporations or organizations engaged in the business of manufacturing, importing or marketing such products. It is stressed that the object of a trade practice conference is to formulate trade practice rules in the interest of protecting the industry, trade *and the public.*

PAPER PRODUCTS PRODUCTION

Set-up boxboard, corrugated board, and other container board and various paper products used by the toiletries, cosmetic and allied industries, are maintaining the pace of record-breaking production in this country, according to the April report of the Bureau of the Census. Much of the extraordinary production is attributed to the receipts of paper pulp from Europe several months ago, and just now going into processed production of the types and kinds of boxes used by your industries.

The report by Census is particularly interesting in the light of the situation reported in England by Reginald T. Hallchurch, the dominant figure in the Wolverhampton Box Co., Ltd., at Wolverhampton, in Shropshire, England. The Wolverhampton concern sets the pace for the industry in the British Isles. It has been the lengthened shadow of the Hallchurch family for several generations.

It is characteristic of the British trade policy that apparently production is less focussed on paper containers for toiletries and cosmetics and similar commodities than on the boxes required for other merchandise. The Wolverhampton firm makes every type of box in abundance except toiletry and cosmetic containers. It is interesting to learn that the firm makes no products for direct export,

Outstanding Synfleur Specialties

★

RODINOL-SYNFLEUR $32.00 lb.

From finest Geranium Oil

Quality absolutely unsurpassed

Sample upon request

Synfleur Scientific Laboratories, Inc. Monticello, N.Y.

REG. U.S. PAT. OFF.

FOUNDED 1889 BY ALOIS VON ISAKOVICS

ATLANTA · DETROIT · HAVANA · RIO DE JANEIRO · MEXICO, D.F.

NEW YORK CITY EXPERIMENTAL LABORATORY—509 MADISON AVENUE, NEW YORK 22, N.Y.—ELDORADO 5-4757

but that at least 50 per cent of its containers are used by exporters.

The great source upon which the container industry in Wolverhampton now relies is strawboard, made of farm straw, which is supplied in surprising volume by the Netherlands. It appears to be tough, durable, abundant, and low-priced. It seems to be the basis of the British paper container industry.

Broadly speaking, the industry in England seems to have the same troubles with labor lassitude, and similar uncertainties, which beset industry in the U. S.

IMPORT AND EXCHANGE PERMITS

Office of International Trade recently urged business men to make sure they were adequately informed about the permits required before goods may be imported into various countries of the globe. Many countries require an import permit which must be secured in certain cases before the order is placed. In many countries, where dollar exchange is scarce, an exchange permit must be obtained before the goods are paid for. Both import and exchange permits must be obtained before goods may be imported into the following countries: Australia, Austria, Belgium, Belgian Congo, Bermuda, British West Africa, British East Africa, British Malaya, British West Indies, British Guiana, British Honduras, Bulgaria, Burma, Chile, China, Czechoslovakia, Denmark, Ecuador, Egypt, Finland, France, French Colonies, Greece, Hong Kong, Hungary, Iceland, India, Iran, Iraq, Italy, Morocco, Netherlands East Indies, Netherlands, New Zealand, Northern Rhodesia, Norway, Palestine, Peru, Poland, Portuguese Colonies, Rumania, Spain, Spanish Colonies, Spanish Zone of Morocco, Sweden, Switzerland, Syria, Turkey, United Kingdom, Russia, Yugoslavia.

The following countries require import permits only for some goods, the identity of which should be obtained, and also exchange permits are required under all circumstances: Argentina, Brazil, Canada, Costa Rica, Eire, Honduras, Portugal, Southern Rhodesia, Union of South Africa, Venezuela. The following countries require import permits but no exchange permits: Bolivia and Colombia. The following require no import permits but do require an exchange permit: Ceylon, Newfoundland, Paraguay, Angola, Siam. The following require neither import nor exchange permits: Cuba, Dominican Republic, El Salvador Guatemala, Haiti, Panama, Philippines, Saudi Arabia, Tangier.

Mexico requires an import permit but does not require an exchange permit. Nicaragua requires an import permit for luxury or superfluous goods, but does not require an exchange permit. Liberia requires import permits for some goods, but not for exchange. Specific details about particular problems may be obtained by writing to Office of International Trade, Department of Commerce, Washington, D. C., or to Area Branches.

Drugs, Chemicals and Pharmaceuticals Section of the Department of Commerce—where Lester A. Barber is the expert on problems of interest to the toiletries, cosmetic, perfumery and flavor industries—reports there is an active market in the Dominican Republic for shaving soap, lathering cream, brushless cream, face and compact powder, cold cream and vanishing cream, skin lotions and balms, rouges, lip preparations, lash and eyebrow preparations, hair dye, deodorants, depilatories, perfumes, toilet waters, colognes, and toilet soaps. In Uruguay there is a market for all forms of lip preparations, rouges, depilatories, deodorants, face and compact powder, cold cream, vanishing cream, skin lotions and balms. Bolivia offers a market for toilet soap, shaving soap, talcum powder, dentifrices, face and compact powder, cold cream, vanishing cream, skin lotions, balms, lipsticks, rouge, depilatories, deodorants, and perfumes.

The same source reports that a small quantity of ambergris is obtained from December to February off the coast of Chile, but it is mostly used in Santiago perfume laboratories. Central Chile is favorable for cultivation of many species of aromatic plants, but out of a half dozen that are systematically grown only one is produced in sufficient quantities to leave an appreciable surplus for export, i. e., marjoram. Origanum is produced in Northern Chile. Peppermint (mentha piperita) is cultivated near Santiago. It is estimated approximately 1000 gallons eucalyptus oil is produced annually in Chile. Peru grows anise commercially and considerable quantities of coca.

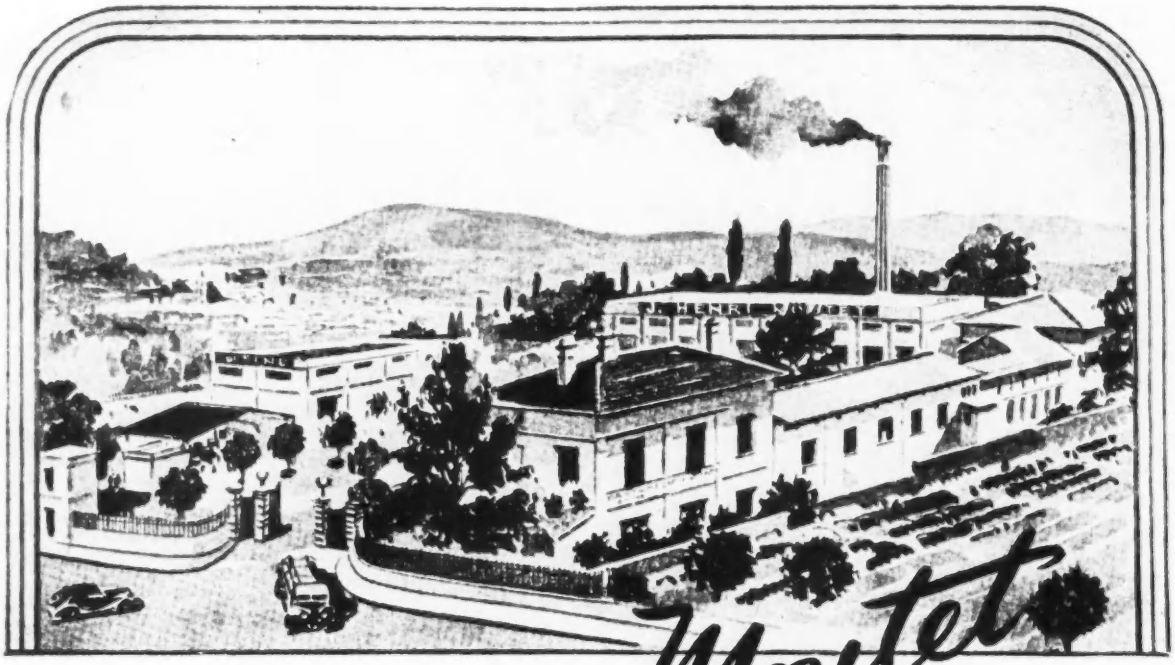
A recent report from the U. S. Mission at Sofia, Bulgaria, states that rose concrete produced in that area was distributed 66 per cent to the Soviets, 25 per cent to Czechoslovakia, the balance to Switzerland, France, Turkey, and to other countries, but none to the United States. Floral essence concrete and attar of rose is now distributed by the State Monopoly in Bulgaria. It is reported recent receipts in the United States were one shipment of 22 pounds valued at $3,193; another of 67 pounds which sold for $22,500. From India the Department of Agriculture received a cable reporting the Indian Government will permit the shipment of 6000 long tons of black pepper during the period from April to September of this year. The U. S. quota has been established at 2000 long tons.

SUPPLY OF FATS AND OILS

Department of Agriculture predicts substantially larger supply of fats and oils beginning next October. Present high world prices are said to have had a vigorous effect in stimulating production. Prices, however, are expected to decline from their present high levels by Fall. Complete elimination of controls is expected by Winter. From Britain comes word of the production in a German laboratory of fats from straw, oat hulls and whey. The whey came from cheese factories and was treated with sulfuric acid mixed with a small amount of ammonium phosphate. Straw or oat hulls were hydrolized with diluted sulfuric acid and treated with sodium hydroxide, phosphate, and nutrient salts. The pilot plant produced approximately 5 tons of fat from 100 tons of crude straw.

During April the Department of Agriculture took over sugar rationing and price controls over sugar. Irvin L. Rice, formerly of OPA, was appointed Acting Administrator of the Sugar Rationing Administration, and Seymour Friedman, Deputy Administrator. Congress extended rationing and price controls until October 31, 1947, and inventory controls until March 31, 1948. It also was fixed that new individual users and hardship cases in commerce may draw upon an allotment of 25,000 tons.

Various sources in the Capital predicted there will be more alcohol available for solvents during May and June.



J. Henri Moutet

USINE ST. CLAUDE

GRASSE

FLOWER OILS · ESSENTIAL OILS & AROMATICS
for the
SOAP · PERFUMERY · COSMETIC & ALLIED TRADES

Laboratories, Distilleries & Head Offices: GRASSE · A. M. FRANCE

ETABLISSEMENTS J·HENRI MOUTET · GRASSE ·

Carl A. Claus

IMPROVING PRODUCTION

ANYONE, interested in "Improving Production" in his plant should, by all means, have attended the recent Packaging Exposition held in Philadelphia. This most enlightening show was conducted at Convention Hall and was in progress from April 8 to 11 inclusive. Undoubtedly, it was not only the largest exhibit that the Packaging Show has ever had, but also the best attended. The crowds milled around all day long and, as a matter of fact, on the one evening that the show was kept open. It was an interested crowd, too, for the people had come to see what was new, what could be used, and what they should have to "Improve Production."

PACKAGING EQUIPMENT EXHIBITED

Perhaps one of the most impressive factors of this exhibit was the number of new names of exhibitors, names of those whom we had never known of as manufacturers of production equipment or materials, used in the packaging industry. For instance, a number of actual package manufacturers, that is, people who manufactured consumer goods placed in packages, who in the past have developed a good deal of their own machinery, have set up a separate department in their organization for the manufacture and sale of packaging equipment. Naturally, a good many of these efforts are the outgrowth of the endeavors of these companies during the war period. They, having had large engineering departments within their organization, had sought new uses for the engineering service which they have available. They have set to work to take some of their own machines, those used in their plants for a number of years, improve and re-design them for popular use in many other plants, and have put them on the market to help "Improve Production" either in their competitors or allied plants.

It might be a question as to just how far and how effective this is going to be. It can be well understood that there are ever so many manufacturers whose expansion during the war period necessitated their seeking new markets for their services, after these departments were no longer needed for war product developments in their own plants. It is surprising how many of them have come over to the packaging industry as a likely field for new developments. In a number of cases large companies have purchased smaller plants or new ideas and have expanded upon them. It is only natural to understand this because post war programs included such efforts. It was gratifying to see these efforts and developments exhibited at the Packaging Exposition and truly anyone interested in "Improving Production" could have learned a great deal by a careful study of the many items on display.

This was made particularly clear to me because of a recent visit I had the pleasure of making to one of the large cosmetic manufacturing plants located not far from the Metropolitan area. In spite of the technological developments, it was appalling to see the number of hand operations being carried on in the preparation and packaging of their materials. The first thing that struck me in particular was the close lines of girls doing repeated operations by hand which one might conceive could be done by mechanical equipment. These finger operations are always the basis for machine developments and should be the key note in any industrial engineer's efforts to perfect improvements in manufacture.

Visits like these prove to me that there is still plenty of room in our country for engineering efforts where real designing ability is involved, to perfect means for the elimination of the many hand operations still being used in many of our industries.

ANTIQUATED PRODUCTION METHODS

In the drug and cosmetic field, most of the products are what are termed "high priced" products, and therefore, it has always been felt that the cost of the hand labor so involved could be justified because of the price of the article itself. It seems that the impression is general that to make a good cosmetic item you should spend a great deal of money for it. It was very evident that the quality of this product could still be maintained even though certain mechanical equipment were used, after which a reduction in price of the article would be possible and broader markets for distribution could be obtained. It is not necessarily true that the most expensive items should be the best items. The mere fact that the ingredients cost a great deal is no excuse for antiquated methods for the production of finished products containing these high cost ingredients.

We might go back to certain thoughts of tailor-made clothing and maintain the platitude that to produce a good suit of clothes only hand methods should be used. If each

pack
to
attract...
...in
Maryland Blue
WRITE FOR SAMPLES
Just tell us the nature of your product and the sizes in which it is packed and we will be glad to send appropriate samples.
Also available in CLEAR glass
MARYLAND GLASS CORPORATION, BALTIMORE 30, MARYLAND
CHICAGO: Berman Brothers, Incorporated, 1501 S. Laflin Street
CINCINNATI: J. E. McLaughlin, 401 Lock Street
JERSEY CITY: Maryland Glass Corporation, 50 Journal Square
KANSAS CITY: Aller Todd, 1101 Mulberry Street
MEMPHIS: S. Walter Scott, 608 McCall Building
ST. LOUIS: H. A Baumstark, 4030 Chouteau Avenue
SAN FRANCISCO: Owens-Illinois Glass Company,
Pacific Coast Division, 320 California Street.

piece of cloth is to be cut by hand and each piece of cloth is to be sewed by hand, it is highly probable that many of us would enjoy a wardrobe of maybe one or two suits. The fact that there have been mechanical means perfected for the production of clothing, utilizing high grade materials, has permitted what we call the "well dressed American." The same thing holds true in the cosmetic and perfumery line. More good products could be used generally if the cost of manufacture could be lowered and their manufacture mechanized so that the labor cost in production could be cut down. It must be remembered that for every dollar that is saved in actual direct labor cost, you will save many times that in the cost of the actual finished product through the incidental saving in indirect labor that is incurred when handling direct labor.

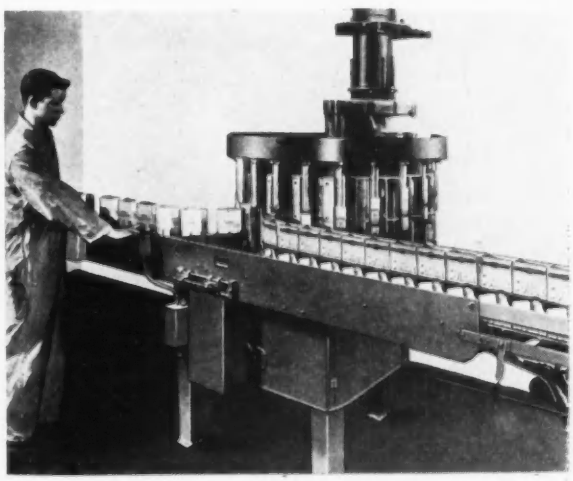
ECONOMICAL PROCESSING OF MATERIALS

The best way to go about effecting these savings is by attending such exhibits as the one that was held in Philadelphia, or through the employment of a good industrial engineer to assist in making suggestions and recommendations on plant layouts, equipment to be installed, and methods to be used for the more economical processing of materials. It is this method of approach that will bring to you and your plant "Improved Production."

ROTARY TELESCOPING FILLER

One of the recent developments of the J. L. Ferguson Co. is its Packomatic Rotary Telescopic Filler. This filler has been designed for handling of free and non-free flowing products, such as cleaners, bowl cleaners, flake lye, drain pipe openers, chemical cleaners, soot removers, coffee concentrates, baking powder, cereals, soap powders and similar products. The company states that the unit is just as simple in construction and operation as it is in appearance. It is just as effective a package filler as it is simple.

The unit has been designed for filling cylindrical cans, regular rectangular folding cartons, or paper and metal containers. Its principle of operation permits the elimination of or the minimizing of any dust or spilling of the materials to be filled into the containers, and being rotary in operation, it permits for the highest possible production speed.



The Packomatic Rotary Telescopic Filler is designed for free and non-free flowing products

A conveyor is provided which carries the packages directly to the infeed station on the equipment. Here the individual packages are selected, placed into their respective stations and as they are being revolved around the filler, the package is telescoped with a sleeve filling device. The package is moved up around this sleeve until the bottom of the package seals off the bottom of the sleeve. The package then enters the filling area where the sleeve is totally filled with the product to be carried into the box or container. As the package is carried out of the filling hood it starts moving downward away from its sleeve. This permits the flowing of the product into the container, filling from the bottom up. In addition, and to permit settlement of the product, the package comes down a step arrangement, each one giving a little shaking or settling effort to the material.

It can be appreciated that as the package is fairly close fitting to the sleeve and that the filling operation is started from the bottom that the dust is eliminated or minimized. Furthermore, the package is properly filled and the materials settled as the filling operation progresses. It is not a question of filling the package first and then endeavoring to settle the material, each little bit is settled as it is fed into the package for a much more uniform type of pack and more satisfactory method of operation.

When the packages again reach the conveyor level they are freed from their filling sleeve and are removed from the rotary head and taken back onto the conveyor removing them from the machine.

Due to the rotary, continuous operating principle of the equipment, exceptionally high speeds, so it is claimed, are possible on this equipment. They are designed to fill packages anywhere from 60 to 140 packages per minute, depending upon the package size and the material itself.

The actual filling or loading of the sleeves, in this particular equipment, is performed in a hooded area, which hood is kept very close to the top disc carrying the filling sleeves. This confines all the filling operations under a very small area and assures confinement of any dust that is so prevalent with the ordinary type powder or free-flowing material fillers. Furthermore, by filling packages from the bottom up, the spilling over is eliminated, which helps maintain a clean finished package so desirable with free and semi-free flowing materials.

SEA MOSS FOUNDS INDUSTRY

In a recent announcement in *Invention News and Views*, which is published for the press by the National Patent Council, there was an announcement of interest to the cosmetic and allied trades.

It was stated that Old Man Neptune aided by chemistry has made another contribution to industry—sea moss. Several years ago the processing of Sea Moss was started and it has now become quite a thriving industry, on the North Eastern Coast. The number of uses that have been found for this processed material is surprising. It is being used as a thickening agent in the food industry, chemicals derived from it are also used in paints, ointments, cosmetics, tooth paste and a number of additional items.

VALUABLE USE OF ALUMINUM PAINT

The Reynolds Metal Co. in one of its recent publications, impressively expressed the value of aluminum paint made from Reynolds aluminum paste, for protection of storage tanks. It has stated that by coating a tank with

The Case of the Banished Toothpaste

JUST LAST WEEK Toothpaste X had a nice, cozy home in Mrs. Brown's medicine chest. But this week he's banished from her bathroom . . . because Mrs. Brown tried Toothpaste Y, and preferred its tangy, fresher taste.

It happens every day . . . this switching to brands that have more taste-appeal . . . or more scent-appeal. So whatever you have to sell . . . toothpaste or toiletries, lipsticks or hair lacquer, pills or pest killers . . . remember you have a powerful ally in MM&R FLAVOR & PERFUME OILS. For this is the alchemy that endows countless products with the sales-magic of individualized flavor or odor personality.

* * *

As one of the world's great suppliers of Essential Oils, Concentrated Flavors and Perfuming Materials, MAGNUS, MABEE & REYNARD, INC. can be of important service to you. Let us show you how distinctive odor or flavor can add sales-appeal to your product, old or new. The facilities of our laboratories and more than 50 years of specialized experience are available to you without obligation.

MAGNUS, MABEE & REYNARD, INC.

SINCE 1895 . . . ONE OF THE WORLD'S GREATEST SUPPLIERS OF ESSENTIAL OILS

16 DESBROSSES STREET, NEW YORK 13, N.Y. • 221 NORTH LASALLE STREET, CHICAGO 1, ILL.

Builders of PRODUCT PREFERENCE through QUALITY ESSENTIAL OILS, PERFUMING MATERIALS and CONCENTRATED FLAVORS Since 1895

Los Angeles: Brous Co-op. • Seattle, Portland, Spokane: Van Waters & Rogers, Inc. • San Francisco: Brown-Knecht-Heimann Co. • Toronto, Can.: Richardson Agencies, Ltd.

liquid aluminum made from this paste, the inside temperature of the contents can be kept down, due to the reflective value of aluminum coating in turning back the radiant heat of the sun. In addition to this, it is claimed that liquid aluminum will also preserve the tanks themselves, providing protective shields against corrosive elements of weather the year round, and will last three times as long as ordinary coating. The value of a bright aluminum for display purposes is particularly stressed because it forms an ideal background for the identification names of advertising signs.

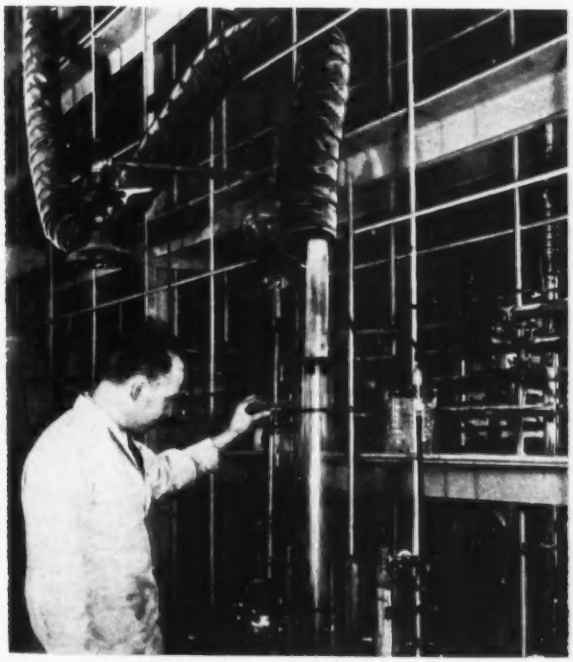
The value of aluminum paint has long been claimed by manufacturers of aluminum paste on inside work as well where tanks are exposed to the sun's rays. Aluminum coatings are intended to keep the temperature within the tank more uniform due to the reflection of radiant heat.

ELECTRONIC METAL DETECTOR

The Radio Corp. of America had on exhibit at the Packaging Show an electronic metal detector, which was a very interesting and revolutionary device. A small demonstration model was being shown with means for running marbles down a track. Some marbles were made of glass, some of them were made fully of metal and others were a combination of glass and metal. The particular unit on display had the ability to select and separate those items containing even the very slightest trace of metal from those that were entirely free of metal particles. A device of this type is indispensable in many industries and the company claims many important features for its particular unit, such as ultra sensitivity in the equipment's ability to detect minute as well as large pieces of metal, and that a discrimination factor can be maintained in the machine through adjustable control. It is also stated that it has unrestricted penetration and will detect metal parts irrespective of how deeply they are imbedded within the product. The versatility of the machine is shown as it will detect any kind of metal or alloy including iron, copper, brass, lead, aluminum, stainless steel, etc.

In construction, this unit appears like two coffin boxes, only much smaller, and a conveyor is constructed so that the material is passed between these two boxes, where the detection of the metal is accomplished.

The manner in which this particular unit works is: As the product to be inspected is conveyed, either by belt or other means, through the inspection aperture it is screened by a high frequency electro-magnetic field formed by scientifically designed coils imbedded in plastic panels at the top and bottom of the aperture. If metal is present, it causes a reaction which is detected and amplified by a sensitive electronic tube amplifier. This amplifier triggers a signaling device, such as a bell or a lamp, or an automatic injector or marking device, or a combination of both, may be used whichever is desired. There are any number of applications of this particular device or detector outlined by the company, which would be glad to send complete information on request.



This particular flexible spiratube is set up for the spot ventilation of a chemical operation

SPOT VENTILATION

The Warner Brothers Co. has announced an interesting development for spot ventilating a certain operation or confined area. It is actually a portable ventilating system and it is accomplished through the use of a self-extending non-collapsible re-tractable flexible tube.

This spiratube consists of thermo-plastically coated fabric, spirally stitched over a helical steel spring core. This prevents the tube from collapsing, makes it easy to handle, and can provide for sufficient capacity for confined work. Obnoxious, dangerous or imflammable fumes can be carried away through the use of this attachment, according to the company.

The descriptions or claims for equipment or devices contained in this article are based on information supplied by the manufacturers of the equipment or articles and do not necessarily constitute endorsement of the products or claims so described.

LOTION DISPENSER

The new Bobrick Hand Lotion dispenser, manufactured by the Bobrick Manufacturing Corp. is an inexpensive device which has been created to build good-will among employees.

Installed in laundries, hosiery mills, factories, processing plants and wherever women need extra care for their hands, the new dispenser is designed for convenience and economy.

Employees receive a measured amount of hand lotion quickly and cleanly, in quantities which are easy to apply. Management favors the hand lotion dispenser because it does not leak, clog or drip. Waste and mess are thus eliminated.

Where employees may require the use of protective or of germicidal lotion, Bobricks are installed for both men and women. This smartly-styled unit dispenses any of the numerous brands of lotion obtainable in bulk at moderate costs.

The new device is a compact wall-type dispenser of a highly modern design. All working parts are made of durable stainless steel.

One Year Old - - -

- - - yet behind this new business is the experience of 37 years — over three decades since Dr. Alexander Katz entered the essential oil, flavoring, and perfume materials business which was a continuation of the business established by his father in 1876. The new business, which is managed by an experienced and competent staff who have been connected with Dr. Katz for many years, is growing rapidly. It is well out of the embryo stage, and entering its second year with excellent production facilities and control laboratories to successfully meet the requirements of the trade.

The entire organization is grateful to its friend for the splendid support given during the first year.

Our Research Laboratory Is At Your Service

DR. ALEXANDER KATZ & CO. 4641-43 HOLLYWOOD BOULEVARD, LOS ANGELES 27, CALIF.
948 HOWARD STREET, SAN FRANCISCO 3, CALIFORNIA

ESSENTIAL AROMATICS CORP. 304 EAST 23rd STREET, NEW YORK 10, NEW YORK

CHICAGO • DALLAS • NEW ORLEANS • MINNEAPOLIS • SEATTLE

A compendium of significant news and views

Harold Hutchins says . . .

VACCINATION vs. BEAUTY

The recent wholesale vaccination of millions of New Yorkers put us to wondering if you have ever given thought to the influence of Edward Jenner on the cosmetic industry? When faces were all pock-marked, what use was there for cosmetics? That is the thesis of the history of cosmetics and its link with medicine.

COOPERATION DESIRABLE

The cosmetic industry should not overlook the possibility of cooperating with the pharmacists in improving ointments, pastes, pomades, creams, milks, lotions and what-have-you for the dermatologists.

MINERAL CLAYS

Many new products are hitting the market these days, as result of the formulation of new types of cosmetics. For example, the mineral clays are having quite a run. Some excellent white, or nearly white, clays are now available. They give the impression of richness to creams and help to hold emulsions.

MEN IN WHITE

Does anyone really have the low-down on the unsupported claims of our Russian friends that they are training physician-specialists in two years? The story we hear is that the future nose specialist in Russia receives no information on health and disease problems in the other fields of medicine and surgery. Could be! Anyway, the new trend in medical education in this country seems to be to give the student a smattering of things during his first four years, with the idea he will pick up what he needs in the hospital. Then, if he goes on to specialization, he learns fully, for the first time, the basic things regarding the particular field he plans to enter. A budding surgeon really learns his anatomy on the operating table. A far cry from the "boning" that marked the first two years of medical schools in the early part of this century. We mention this matter, because the pattern followed by the medical profession is usually followed by other fields of research. The recent cry for more money for medical schools to teach medicine, rather than money for specific research problems, reminds one of the lop-sided cosmetic field, which spends unlimited funds on research, without earmarking anything for improvement of current sales or merchandising methods. It is interesting to see how many physicians enter research fields, rather than going into general practice, and how many non-physicians are researching in medical lines. The cosmetic and pharmaceutical fields, however, are rearing their own research people, and more luck to them. By the way, did you know that there are 180,000 physicians in America, of which some 26,000 are certified specialists? In time, your family doctor will be classed as a specialist, because such certification is now in the making.

SEEKS INFORMATION

A friend of this publication seeks information, advertising material and samples of emulsifying agents, including binders or bonding agents, defrothers, detergents, dispersing agents, excipients, froth producers, saponifiers, scouring agents, suspending agents, thickening agents and wetting agents, or by whatever name known. Send the stuff along to me for him, or please answer the letter that he either has sent or will send to many of you.

FOLLOW THE LEADER

We hear tell of the professors of psychiatry who are interested in what they wish to call the psychology of leadership and the characteristics of those following leaders. But, not a word about the do-nothings!

BIG PARADE

Soap substitutes continue to hold the spot-light. More and more of them seem to appear daily. Are you hep?

VITAMIN LESSON

You would think with all the advertising and publicity on vitamins, doctors would be hard put to find subjects for their color pictures of mild and advanced avitaminosis. But, a glance at any medical journal, or a visit to any display, shows the cases are still around. Something wrong, we must admit. Now, don't forget your vitamins today! By the by, did you read how penicillin destroys certain bacteria in the body, and the body can't go on making or utilizing the vitamins required for good health? This world becomes more complicated every day. We know of one old-fashioned doctor who insists on continuing with all the old medicines, whenever he gives the new ones. So, when the patient requires penicillin, he also gives sulfonamides, plus vitamins, and extra diet. He's a funny guy and simply won't rely on the vaunted specifics, alone. And while we are on vitamins, we wonder what became of those tight little groups of diseases, due to deficiency of one quotient of one vitamin? It seems now as if the vitamins had inter-actions and more inter-actions. Pellagra, for example, requires pyrodoxine, nicotinic acid thiamine and riboflavin.

The Product of a good Craftsman needs no recommendation.

He who knows how to produce **BEAUTY** will have people seeking his door. The Diaphanous thing of moonshine we call **PERFUME** has the Power to stir the Soul. The Caravans that trailed into Damascus and Samarcand live in song and story, not because they carried woolen threads woven together — but because they brought **BEAUTY.**

The Nucleus and Essence of that quality of Perfection is found in

DEVOTION

Sweetest the strain — when in the Song
the singer has been lost

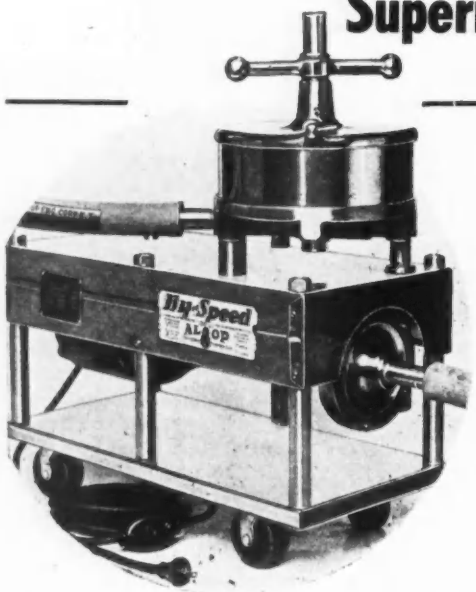
We humbly submit this FRAGRANCE for the delight and inspiration of the Understanding in Heart.

SPARHAWK CO.
SPARKILL N. Y.

Be not like the stream that brawls
Loud with shallow waterfalls,
But in quiet self control
Link together Soul with Soul
Longfellow

When from the censar clouds of fragrance roll
And swelling organs lift the rising soul
One thought of thee puts all the pomp to flight
Priests, tapers, temples swim before my sight.
Alexander Pope

"*Sealed-Disc*" Filters — *tried and proven*
Superior in Efficiency and Results



The "*Sealed-Disc*" Filter is complete as shown, ready for instant use. Entirely sealed, eliminating loss of liquid from leakage or evaporation.

Alsop Filters of various sizes and capacities are meeting specific filter requirements with speed and efficiency in thousands of processing plants large and small.

You can give your products a decided advantage in appearance and acceptance, plus uniform clarity and protection against foreign impurities by using an Alsop "*Sealed-Disc*" Filter in your plant.

We'll be glad to send you all the facts. Just write us, giving details of liquids and quantities to be clarified.

ALSOP ENGINEERING CORPORATION
Filters • Filter Pads • Pumps • Tanks • Mixers • Agitators
205 ROSE STREET, MILLDALE, CONNECTICUT

NEWS . . . **Harold Hutchins Says** . . . VIEWS

WHAT A MAN!

Our favorite Health Commissioner of that great big city has gone and done it again. He has padlocked a few eating places for continued and repeated violation of the Sanitary Code. Next, comes the closing of some beauty shops and barber shops, for failure to observe the rules of cleanliness. And, someday soon, he will see to it that no more smoke gets in your eyes. What a man! Incidentally, look for some surprising news from that same big health department, involving new offices and new officials, all for the sake of the health of the seven million people living in the place and the several million more who visit it every year.

PSYCHOSOMATIC COSMETOLOGY

Watch for some wise guy to come along with a lot of stuff on psychosomatic cosmetology. Some clinics are working on this, to the extent of determining the influence of the mental side on the loss of hair, but not the influence on the loss of the hair on the psychic side of the patient.

RUG-SAVER

Effective use of the fungicide G-4, a product of Givaudan-Delawanna, has just been discovered to be effective in the preservation of the backs of rugs, according to a recent report released by the Canadian Research Institute of Launderers & Cleaners.

TEXAS CITY DISASTER

The recent catastrophe which marked the destruction of the Monsanto Chemical Co. plant in the Texas City disaster serves to remind us of the recent report made to stockholders of Monsanto by company officials. Board Chairman Edgar M. Queeny told of the construction of new facilities to cost $50,000,000, with more than $22,000,000 in construction already under way. William M. Rand, president, told of Monsanto sales reaching almost the hundred million mark in 1946, with profits after taxes being twice as large as 1945. Over-all employment had increased 21 per cent in the past year, with an increase of 40 per cent in the sales department, despite the loss of 1,926,380 manhours of production at three key plants due to strikes. More than 15,300 persons were employed by Monsanto on January 1 of this year. With little thought of what the future held, Rand, in speaking of the company's plans and developments to his stockholders, reported the purchase for approximately $10,000,000 of a styrene plant at Texas City, Tex., to aid in the company's production of polystyrene plastics. Less than a month later, the plant had been totally destroyed, along with an appalling loss of life. But, Rand recently reported that parts of the plants would be back in production, within six months, and a half million dollars had been appropriated for relief of their Texas City employees, in addition to meeting all legal claims, fully covered by insurance. Viva Monsanto!

ARSENIC ANTIDOTE

How long ago it was that readers of these pages of wisdom were told of the war-research BAL. This British anti-Lewisite or dimercaprol continues to be found useful in arsenical poisoning. Yes, BAL is one good thing that came out of the war. Does anybody know another?

FREE ENTERPRISE?

Shake down all of our national problems, and the chaff is indecision and discord, especially in Washington. The other day, President Truman declared it was up to American business to reduce prices and make the free enterprise work. The President probably knows better than anyone else that big strikes don't make sense. It ought to be as plain as the nose on a politician's face that the great employing institutions of the United States can't continue to surrender to put up with strike leaders and their fellow conspirators. These leaders still threaten that large manufacturers must continue to make wage increases, or they will cause new strikes all over America. We pause to remark that the telephone strike has been unpopular with the American people. You don't need to be told that the coal strikes, and all the fuddle-duddling by strike leaders has disgusted the American public. Congress, as a result should have reached the point where it will pass fair, reasonable and just laws that will put an end to all these reckless strikes that have upset the American economic system, not only for the past two years, but for the past thirteen years. Of course, the telephone strike is in a class by itself, because such a strike is even more definitely against the American public than the railroad strike. Speed the time when Congress lays down definite rules for preventing strikes, and strong laws to stop labor leaders. We are approaching that situation very rapidly and it will probably do more than anything else to restore Democracy and the American system of life.

IDEA DEPARTMENT

Wouldn't you think some provision could be made to carry mail in asbestos bags, to avoid its destruction by fire on airplanes and baggage mail cars? And one step more—how about an asbestos cover-all for airplane personnel and passengers? Bet the things could be real cute, too!

ABOUT ABIOTICS

Every day, the wonders of abiotics increase and the end is not in sight. And every day, the once-upon-a-time boasts of non-poisonous action seems to go by the board. The patients and the administering physicians are suffering untoward reactions. Nice word, that untoward!

BARBERS SPECIALIZING

We now see that the barbers are specializing, too. A barber shop solely for children recently made its appearance in Mid-town New York. What is this world coming to? No more *Police Gazette*, no more barber shop quartets and no more security for the lowly male, anywhere.

OUR NEEDS AND RESOURCES

America is fully equipped to outdo even her wartime production record in the decade 1950-1960, according to the Twentieth Century Fund's comprehensive new survey of "America's Needs and Resources," which indicated that even if we can continue our past rate of growth into the next decade, we can provide our people with still more goods and services than at wartime peak, with less hours of work. The survey measures past accomplishments and estimates future output and needs in virtually every part of our entire economic system. Dr. J. Frederic Dewhurst, economist of the Fund, directed a staff of experts in a three-year study and did the principal part of the writing and editing of the final report.

COMING DOWN

Prices are still out of balance—especially food, clothing and other necessities of life. But those prices are coming down. Why? Because there has been a wide-spread buyer's strike. That is why some merchants and store-keepers are advertising lower prices. These drops in prices have started many readjustments. There has been full employment for more than a year and that increased consumer demands. People spent more of what they earned, as shown by the fact that the rate of savings declined sharply from a peak of 38.9 billion in 1944. But borrowing is still running at 500 million a month.

Finest

FROM FAR AND NEAR

Now, for the first time since the war's end, the Citrus and Allied Essential Oils Company once again offers importations of the finest calibre oils from Italy . . . together with best quality oils from the West Indies and its well-known line of distinctive products from its Brooklyn plant.

CHOOSE FROM THIS VARIED LIST . . .

● *Imported from Palermo Italy*—

PURE HAND PRESSED LEMON
PURE HAND PRESSED ORANGE
PURE HAND PRESSED MANDARIN

SWEET ALMOND OIL—ITALIAN "SCACCIANOCE" BRAND

Unquestionably the finest oil obtainable.

BERGAMOT OIL

ORIGINAL CONSORZIO 25 LB. PACKAGE

A Pure Product Guaranteed by Law . . .

Citrus and Allied Essential Oils Co. is Official Stock Distributor for Consorzio del Bergamotto Reggio Calabria.

● *From our factory in Puerto Plata, Dominican Republic—West Indies—*

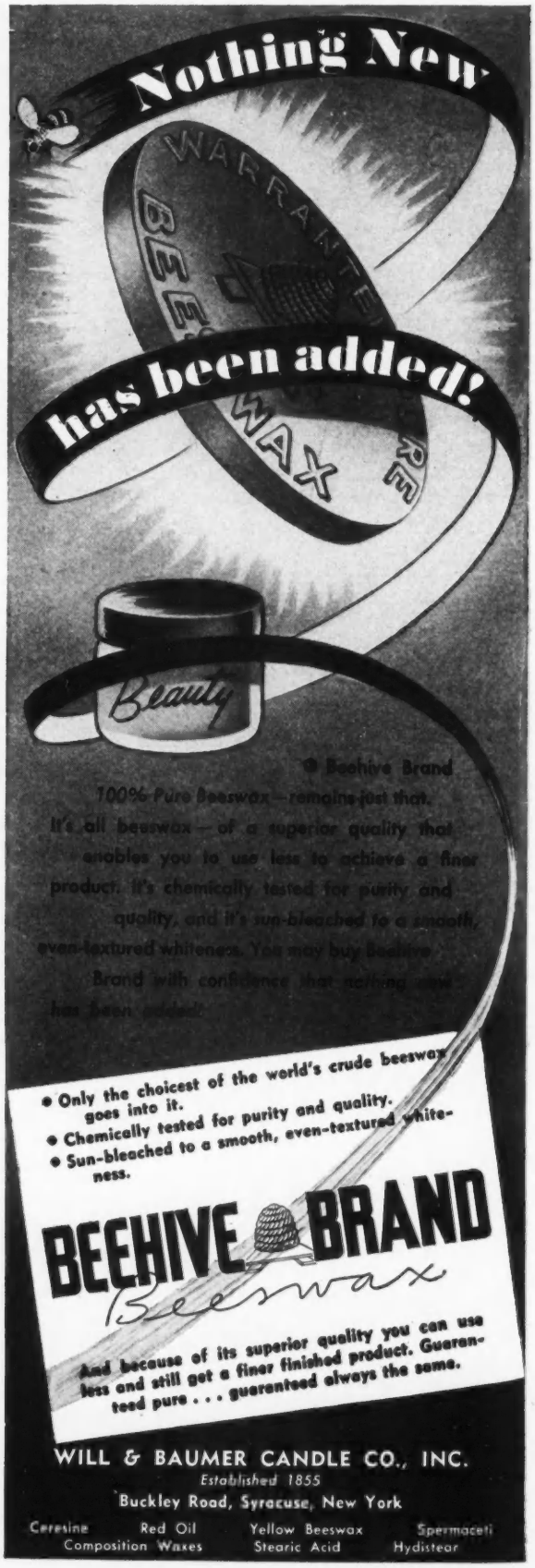
BITTER ORANGE OIL—H.P.N.F.
(Largest Producers in the World)
LIMES DISTILLED
(Scientifically Processed High Citral Content)

● *From our Brooklyn Plant*—

TERPENELESS, SESQUI-TERPENELESS AND CONCENTRATED CITRUS OILS
(Manufactured only in glass at low vacuum)
LEMON—ORANGE—BERGAMOT—LIMES

. . . Ask for Samples

CITRUS and ALLIED ESSENTIAL OILS COMPANY
61-63 SHEFFIELD AVE. BROOKLYN 7, N. Y.


Nothing New
has been added!
WAX
Beauty
● Only the choicest of the world's crude beeswax goes into it.
● Chemically tested for purity and quality.
● Sun-bleached to a smooth, even-textured whiteness.
BEEHIVE BRAND
Beeswax
And because of its superior quality you can use less and still get a finer finished product. Guaranteed pure . . . guaranteed always the same.
WILL & BAUMER CANDLE CO., INC.
Established 1855
Buckley Road, Syracuse, New York
Ceresine
Red Oil Composition
Yellow Beeswax
Stearic Acid
Spermaceti
Hydrotear

NEWS . . . **Harold Hutchins Says** . . . VIEWS

PROPRIETARY CONVENTION

The cosmetic industry will be well represented at the 65th Annual Convention of the Proprietary Association, to be held at the Hotel Claridge, Atlantic City, May 19-21. On Sunday evening, prior to the opening of the convention, a cocktail party will be given by S. B. Penick Co. The Maryland Glass Co. will be hosts at a cocktail party on Monday evening, and Baker Chemical Co. are entertaining with cocktails, before dinner, at Haddon Hall, on Tuesday evening. Other high-lights in the entertainment program include a special photographic studio that Owens-Illinois will set up at the convention, enabling everybody to have their "pitcher took" for free to send to the folks back home. Phil Heuisler of Maryland Glass Co. will serve as Chairman of the Ladies' Affairs Committee. R. B. Magnus of Magnus, Mabee & Reynard will be Chairman of the Tuesday Night Committee. Other members of the cosmetic industry, serving on various committees, are Thomas Farrell of Drug & Cosmetic Industry, Max Eddy of Kimble Glass Co., Lloyd Bunting of Noxzema Chemical Co., Fred Stock of Fritzsche Brothers, H. J. Dietel of Merck & Co. Inc., E. F. Bertrand of Owens-Illinois Glass Co., Harold Green of L. Sonneborn Sons, Inc., Victor E. Williams of Monsanto Chemical Co., J. P. Remensnyder of Heyden Chemical Co., Harold Hutchins of Drug & Cosmetic Newsletter, and probably others we have unintentionally omitted. At any rate, W. T. Allen of Topics Publishing Co. and General Chairman of the Entertainment Program is to be congratulated for the selection of his Committeemen from all segments of the industry. Kenneth A. Bonham of Emerson Drug Co. and President of the Proprietary Association, along with Dr. Fred Cullen of the Association, have provided equally interesting business sessions for the meeting and also secured the services of a battery of top-notch speakers to address the various sessions.

TRADE PRACTICE CONFERENCE

No subject is perhaps of greater interest to the cosmetic industry at the moment than the pending Trade Practice Conference for the cosmetic industry, at the invitation of the Federal Trade Commission, in hopes that a set of rules can be established for the purpose of eliminating some of the "bad business habits" of the industry. An over-all industry committee has been at work for some time conducting preliminary meetings, for the purpose of establishing methods of arriving at these rules. The future progress of this committee will be sensed at a meeting to be held on May 12, at the Waldorf-Astoria, when the industry and government representatives hold the first joint-meeting, prior to the Annual Meeting of the Toilet Goods Association at the same hotel, May 14-16. It is to be expected, in a situation like this, that a minority group might easily deter the normal progress of such a meeting, because of the many sides to the cosmetic business. It has been rumored that more than one set of rules may be necessary to cover the cosmetic field, instead of a single set like the household dye field recently accepted, just as baseball requires several officials on the playing field, while only one referee is needed in the ring at a prize fight. This is because the cosmetic industry is made up of lines that are sold from wagons, some door-to-door, some in swank department stores with demonstrators, some in syndicate, independent and chain drug stores, as well as other outlets, with some using demonstrators and some not. But, if the industry is as smart as it should be, individual members will instruct their lawyers to work for the general good of the industry, as a whole, rather than trying to devise means of clipping the wings of their competitors. If the industry doesn't utilize this opportunitiy to formulate its own rules, the FTC will most certainly make its own rules and foist on the industry. This might not be as good a set-up as the industry could carve for itself, provided no faction kicks over the traces and upsets the splendid ground-work already laid by officials of the Toilet Goods Association and other leaders in the field. Among the toughest nuts to crack will be the subject of demonstrators, avoiding conflict with the Robinson-Patman Act, non-discrimination among outlets for merchandise, equal distribution of P.M's, and advertising allowances. Any hope that help might be found in the Elizabeth Arden case was dissipated when the U. S. Supreme Court recently decided not to review an earlier decision of a lesser court. Certainly, every segment of the industry hopes for the best to come from these pending conferences.

ATOMIC COSMETICS

We wonder how the atomic bomb affects the price of radium in medicine and surgery? Will the cost go down and down? And how does a hospital or a clinic or a physician acquire some of those atomic physics preparations for clinical trial? Anyway, a fellow sends a request for an allotment, or is it all in the bag? Are any atomic cosmetics coming?

STRETCHING IT OUT

Rubber consumption during January set a new monthly peak, according to a report released by the Rubber Manufacturers Association. The rubber industry used 45,372 long tons of natural rubber and 57,367 tons of manufactured rubber to establish the new record consumption of 102,739 long tons, which was 11.4 per cent above December 1946, and 32.8 per cent over January a year ago. In addition, 26,061 long tons of reclaimed rubber was consumed—an increase over the previous month of 10.4 per cent and 18.3 per cent above the same month last year.

MATHIESON ON MOVE

Total cost of the present plant modernization and expansion program of the Mathieson Alkali Works is now estimated at $9,500,000, according to George W. Dolan, president. This estimate does not include alteration of the recently acquired government ammonia plant at Lake Charles. The program which was started in 1945 will probably be completed late in 1947. Production of caustic soda and soda ash, both of which are in critically short supply, will be substantially increased.

666 INSECT KILLER

It is reported that experimental quantities of 666 (hexachlorocyclohexane) are now being produced. The most promising application for 666 is in the destruction of cotton insects, such as the boll weevil, cotton aphids, cotton fleahopper, etc. The chemical also acts swiftly on many of the tiny fruit and vegetable aphids. To overcome lack of residual strength, 666 may be combined with DDT for special applications.

2,4-D IN LIQUID FORM

Knox-Out Weeds Liquid, a new 2,4-D compound in the growing family of Knox-Out products, now is being sold by the Pennsylvania Salt Manufacturing Co. One pint of the liquid weed killer, easily mixed in 20 gallons of water, will effectively treat 4,000 square feet of planted surface, Pennsalt reports.

PURELY PERSONAL

MARTIN REVSON, vice president of Revlon, recently authored a booklet, "There's Nothing Wrong With the Cosmetic Business," which was mailed out to their customers.

NEWS . . . **Harold Hutchins Says** . . . VIEWS

EVE KIELY has resigned from Chen Yu to join the Earle Ludgin advertising agency of Chicago. Other Chen Yu changes include Richard C. Jones, art director and assistant to Louis Ruskin, who has opened his own offices in New York to specialize in the packaging, designing, displaying and promotion of cosmetics.

WILLIAM SCHULTZ, president of Shulton, has recently returned from a two-month vacation in Florida.

BOB JOHNS of the Payne Furniture Co., Boston, Mass., has been named general manager of Elizabeth Arden.

BOB MAYER, formerly with the BIOW agency, has joined McCann-Erickson to work on the Revlon account.

LLOYD V. YOUNG has been named president of Ponds, succeeding Clifford M. Baker, who has been named Chairman of the Board.

CORDAY PARFUMS recently held a "Welcome Home" party for Benson Storfer, president, and Helen Allen, vice president, upon their return from a two-month visit to France, where they visited Grasse, the home of all fine French perfumes.

RUTH ANN BOLWAY has resigned her position as publicity director of Dana Perfumes.

FULLER BRUSH CO. salesmen now carry a line of hand lotion, shaving cream, tooth paste, tooth powder and shampoo, along with their brushes.

DOROTHY GRAY has taken over the American distribution of Suzy Perfumes.

SAN FRANCISCO TOILETRIES SHOW will be held August 17 to 23.

POND'S will use over 51 million advertising messages on their new "Angel Face," during the first six months of 1947.

LIP-TRIC is the name of a new lipstick remover, recently introduced by Civray, Inc. A mirror on back of the Lip-Tric bottle provides the convenience it was intended to be.

DEVILBISS CO. has started to take over an additional 105,000 square feet of space, which they will be moved into by July 31st, in order to step-up production of medicinal atomizers, necessitated by new treatment of respiratory diseases by the medical profession. The present production facilities for perfume atomizers is estimated to be sufficient for the *immediate* future.

CLEVELAND Toilet Goods Association will hold its next show on August 10th-15th.

JOSEPH MAGNUS of Magnus, Mabee & Reynard makes frequent use of his brother Percy's box at the Yankee Stadium, hosting various members of the cosmetic industry at the home games.

PEGGY SAGE will bring out a new (June) color called "Raving Beauty." By way of promotion, she will conduct a contest to find the Raving Beauty in all of the outlets that handle her merchandise and send the winner to Hollywood for a Paramount screen test, and a trip through the film capital, under the guidance of the editors of *Photoplay*.

W. J. SCHIEFFELIN, JR. of Schieffelin & Co. recently announced that members of their "Quarter Century Club" will henceforth be entitled to three weeks' vacation, instead of two.

KEN DILLER of American Druggist magazine will speak on his favorite subject of cosmetics before many of the coming State Pharmaceutical Association conventions, including those of Ohio and Massachusetts.

HERCULES POWDER Co. reports for the three months ending March 31st, 1947, showed net earnings of $4,032,448, equal to $1.49 a share on 2,633,420 shares of common stock outstanding.

RAY SCHLOTTERER, secretary of the Federal Wholesale Druggists Association, published the following in the April 21st issue of his FWDA News Capsule—"Conducting his own private test, as to the power of odoriferous advertising, Harold Hutchins last week sent out copies of his Drug & Cosmetic Newsletter impregnated by 'Black Magic' Perfume. Advertising smells—may as well make it smell good, he apparently reasons." (Editor's Note—We are advised that a few sample copies are still available and may be had gratis by writing to Drug & Cosmetic Newsletter, 265 North Fulton Avenue, Mount Vernon, N. Y.)

DAGGETT & RAMSDELL new Debutante line of cosmetics for young adults seems to be one current promotion that is steadily forging ahead and ringing up sales wherever it is shown.

HERMAN BROOKS, president of Alexandra De Markoff, announces the appointment of Robert Arcularius to cover the Philadelphia, Baltimore, Washington and New York territory. Also the appointment of Sylvia Stein and Ann Cameron, as road girls to train sales personnel, and Edwin Banta to cover the Mid-West area.

N. BAZZI, formerly with Pepsodent, is now connected with Nestle Le Mur.

IRVING STROUSE of Rubicon Perfume Lamps is one of the backers of the current hit-show, "Finian's Rainbow."

J. A. BENSON, formerly with 5-Day Laboratories, has joined Princess Pat, covering the Metropolitan New York area.

HENRY WITTNER, president of Universal Laboratories, has announced plans for salesmen of a subsidiary, American Druggist Syndicate, to take over the distribution of Mavis, Melba, Vivaudou and Dier Kiss, to independent druggist, only.

NORTHAM WARREN will introduce "Applecart" and "Pippin" as their next CUTEX shades.

IMPERIALE RUSSE is readying "Fragrant Flower Petal Deodorant Pads" for the Summer.

JULES FINESTONE, formerly with the May Co., is now merchandise manager of Gaxton's in Baltimore, where he also does the buying of cosmetics.

INTERNATIONAL BEAUTY SHOW at Grand Central Palace last month brought forth many innovations, including a $2.800 Rubberset Shaving Brush, a hair dryer equipped with radio earphones, and electric mittens to eliminate rough, red hands.

LEONORE BUEHLER of Prince Matchabelli has recently returned from a Florida vacation.

DOROTHEA McAVOY, formerly beauty editor of *Screen Guide*, has become publicity director for movie star Roy Rogers.

HARRY JOHNSON of Kathleen Mary Quinlan is on an extended trip to the Middle West and Southwest, greeting friends he hasn't seen for the past two years, because he has been confined to New York City.

CHESTER T. BIRCH, formerly vice president of the Robert Orr advertising agency, New York City, has been named vice president in charge of advertising for the Andrew Jergens Co.

NEWS . . . **Harold Hutchins Says** . . . VIEWS

CARL M. ANDERSON, chairman of the legislative committee of the Drug, Chemical & Allied Trades Section of the New York Board of Trade, presented briefs urging uniformity of drug laws, at a recent hearing held by the New York City Board of Health, called by DR. ISRAEL WEINSTEIN to discuss proposed amendments to the New York City Sanitary Code governing the distribution of barbiturates.

OWENS-ILLINOIS GLASS CO. has issued a set of safe rules for handling and taking medicines, contained in a new prescription wrap-around folder which is being supplied to druggists without charge.

CARBIDE & CARBON CHEMICALS CORP. has moved its Los Angeles district office to 416 West Eighth Street, Los Angeles 14.

McKESSON & ROBBINS has begun an extensive four-color campaign in national magazines to promote its line of Tawn toiletries for men.

WILLIAM R. WARNER CO. has purchased the Pacific Press Building from Time-Life Publishing Co., as part of an over-all expansion program.

MEDICAL DIVISION of the American Chemical Society will publish its first monograph in 1948 to mark the United States leadership in medicinal chemistry.

CELANESE CORP. OF AMERICA reports a record sales volume for 1946 of $135,202,211 compared with $104,197,237 for 1945.

DOUGLASS WAKEFIELD COUTLEE, director of advertising for Merck & Co., Inc., and Editor of the Merck Report, will supervise the Advertising Council's forthcoming "Fight Tuberculosis" Campaign.

FEDERAL REGISTER for April 23rd, carries a report from the Bureau of Internal Revenue, listing a considerable number of technical amendments to the regulations for the production, handling and sale of industrial alcohol.

CARL PRATT, sales manager of Dermetics, names Annarita Shea, formerly of Primrose House, as his personal assistant; Bob Breidenstein, formerly with Primrose House and Faberge, to cover eight of the Midwest and Southeastern states; and Larry Brundage, formerly of Lever Brothers and Revlon, to cover New England, New York and parts of the Mid and Southwest.

DOROTHY MORRISON, for many years on the stage and now publicity director of Dermetics, has created a window display in their 630 Fifth Avenue salon that is well worth seeing.

RANDALL M. DUBOIS has been named sales promotion manager of Prince Matchabelli.

J. C. GAMBLES, managing director of Peggy Sage Ltd., is here on a visit from London.

SUTRA will make its appearance this summer in new bottles and labels.

PROCTER & GAMBLE recently introduced its new, improved Drene, at a press luncheon in New York at the Hotel Biltmore. Product now contains an increased amount of "Hair Conditioning" element, a new "suds boosting" ingredient, and is perfumed with a new combination of floral odors.

H. P. McCLURE has been appointed sales manager of Kay Daumit Division of the Colgate-Palmolive-Peet Co.

HEYDEN CHEMICAL CORP., holding its prices substantially to the 1945 levels, showed consolidated net earnings after taxes of $2,416,523.06 for the year 1946, as compared to the 1945 net earnings of $1,403,342.32.

RAYMOND E. REED, formerly with Raymond Laboratories, Inc., has been appointed Director of Cosmetic Research and Development for the William R. Warner Co., which embraces Richard Hudnut, Raymond Laboratories, Bathasweet Corp., Courtley Ltd., and all other cosmetic companies controlled by Warner.

AMERICAN CYANAMID CO. has leased an entire floor at 48 West 38th Street, New York City, for use as additional laboratory and office space.

CARGO has a new cologne-type of deodorant, packaged in a $1.00 travel size.

ROBERT R. DREISBACH of the staff of the physical research laboratory of the Dow Chemical Co. has been presented with a silver medal by the Hyatt Award Committee for his achievement in the plastics industry in 1946, in recognition of his contribution to the development of styrene. Dr. John J. Grebe, director of the laboratory, was awarded a gold medal and $1,000, at the same time.

GEORGE W. MERCK, president of Merck & Co., recently addressed the Division of Medicinal Chemistry of the American Chemical Society, stating that super-scientists, skilled in more than one scientific field, as well as thousands of other competent scientists, are urgently needed.

UNITED JEWISH APPEAL of Greater New York has set a goal of $500,000—double the 1946 objective—for the drug and cosmetic industry in its 1947 drive.

DANIEL R. MOSER has been named Minneapolis sales representative for the Columbia Chemical Division of Pittsburgh Plate Glass Co.

DR. FOSTER D. SNELL has announced that Foster D. Snell, Inc., has moved from 305 Washington Street, Brooklyn, to 29 west 15th Street, New York 11, N. Y.

WILLIAM K. WALLBRIDGE has been elected president of Lamont, Corliss & Co., and Clive C. Day has been named executive vice president.

MONSANTO CHEMICAL CO. has opened a new plant at Springfield, Mass., for the manufacture of Resloom, a new type of melamine resin used to impart shrinkage control to woolens, cottons, rayons and blends.

PAUL DREIFUSS, Manhattan sales representative, is introducing Lastone, a new "non-toxic" hair dye, which Macy's first introduced.

BRUCE STEVENSON has retired, after 21 years of service with Solon Palmer, to be succeeded by Jack Burke.

CHEN YU now distributes Joy Manicure implements to drug stores and cosmetic sections of department stores.

SULFOAM SHAMPOO will soon enter into a national advertising campaign, to be placed by the Jack Korn advertising agency of Philadelphia.

JACK CARSON, formerly with N. W. Ayer, has joined the Lennen & Mitchell advertising agency and will serve as account executive on DOROTHY GRAY.

W. B. EDWARD KANE has been appointed central territorial manager for Jacqueline Cochran cosmetics.

THE MERCK REPORT, March issue, page 24, carries an interesting article by Howard T. Behrman, M.D., and Oscar L. Levin, M.D., on "The Treatment of Some Common Skin Diseases," reflecting advances both in diagnosis and therapy in the field of dermatology.

NEWS . . . **Harold Hutchins Says** . . . VIEWS

MARY BAILEY, beauty editor of Fawcett Woman's Group, announced the release of a new "Hand and Nail Care" survey, just off the press. Copies may be obtained by writing to her at Fawcett Publications, 67 West 44th Street, New York City.

KENNETH H. LISNER has been named sales manager of the Dr. W. B. Caldwell Co. Division of Sterling Drugs Inc.

VINCENTE BERRUETA-CLEMENT, vice-president and export manager of Lentheric, is on a three-month business trip to Central and South America, visiting Brazil, Argentina, Chile, among other places.

BRISTOL-MYERS CO. consolidated sales for the year ended December 31, 1946, were the largest in the company's history at $47,828,189 compared with $37,136,522 in 1945, the previous peak volume.

REYNOLDS METALS CO. and its wholly owned subsidiaries earned $4.94 per share of common stock, after provision for dividends on preferred stock, in 1946 as against $4.03 per share in 1945. The 1946 REYNOLDS annual report carried a cover that is color printed on aluminum foil, which silently attested to the company's interest in aluminum and its products.

H. P. PAUL, chemical engineer with Atlas Powder Co., has been assigned as technical representative of the Industrial Chemicals Department for the New England district, while L. G. PARKINSON, chemical engineer, has been assigned to the mid-west and is attached to the Chicago office as technical representative of the same department.

WILLIAM P. MARSH, JR., vice president of U. S. Industrial Chemicals, Inc., has been elected a director of the company.

PROCTOR & GAMBLE, after a year of successful testing in the markets of Providence, Indianapolis and Minneapolis-St. Paul, has introduced its new tube shampoo, Prell, on a nation-wide basis.

GUY BERGHOFF, director of public relations for Pittsburgh Plate Glass Co., has assumed direction of all the company's advertising activities.

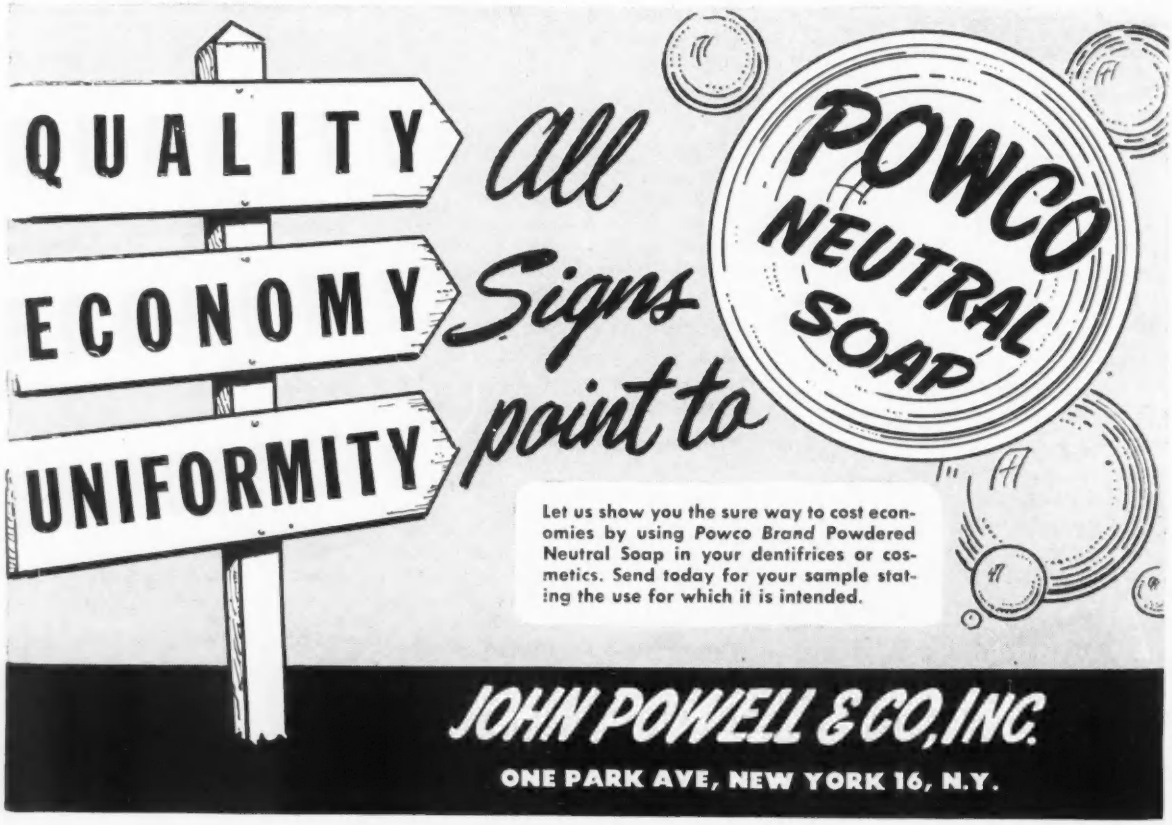
DR. S. D. GERSHON has been appointed director of new products development for the Pepsodent Division of Lever Brothers.

SPOONER, INC., manufacturers of a full line of cosmetics, has been purchased by Maison Evilya.

LANDER Co.'s novelty lamp package of three ounces of toilet water has been selected by the judges for "the best use of materials" in the cosmetic division of the Eleventh Annual 5¢ to $1 packaging contest, held by Syndicate Store Merchandiser.

WILLIAM P. DRAKE has been named assistant vice-president of the Pennsylvania Salt Manufacturing Co.

I. ALTER, president of A'Cadia Powder Puff Co., Inc., has announced the purchase of the National Lambskin Products Co. LOUIS PASSLOFF, formerly of National Lambskin Products, has been elected a vice-president of A'Cadia Powder Puff Co., and is in charge of the National Lambskin Products division. In addition to lambskin puffs, he will now be able to offer the entire range of A'Cadia products, including velour puffs, sachet pillows, pouches, cosmetic kits and stitched novelty packages.


QUALITY
ECONOMY
UNIFORMITY
All Signs point to
POWCO
NEUTRAL
SOAP
Let us show you the sure way to cost economies by using Powco Brand Powdered Neutral Soap in your dentifrices or cosmetics. Send today for your sample stating the use for which it is intended.
JOHN POWELL & CO, INC.
ONE PARK AVE, NEW YORK 16, N.Y.

THE ROUND TABLE –

Supreme Court Refuses Elizabeth Arden Review

The United States Supreme Court has refused to review the ruling of the U. S. Circuit Court of Appeals in New York City, upholding the Federal Trade Commission cease and desist order regarding demonstrators against Elizabeth Arden, New York, N. Y.

As six other cases are pending on the use of demonstrators by other cosmetic firms, this decision is important.

Perfumers' Society of Aromatics Industry Formed to Advance the Art

To advance the art and science of perfumery in the United States and also to promote fellowship and professional discourse, the Perfumers' Society of the Aromatics Industry has been organized. Plans for the permanent organization were completed at a dinner April 19 attended by 22 representatives of 19 essential oil and aromatic chemical houses. The organization committee consisted of William Dunney, Sr., Ungerer & Co.; Samuel Klein, Synfleur Scientific Laboratories, Inc.; and George Tombak, E. I. du Pont de Nemours & Co.

Officers of the new association are: President, William Dunney, Sr., Ungerer & Co.; Vice President, Anthony T. Frascati, Firmenich & Co.; Secretary, William H. Barlow, Orbis Products Corp.; and Treasurer, R. B. Houk, Dodge & Olcott, Inc. Members of the executive committee are Joseph Balsam, Givaudan-Delawanna, Inc.; Fred Fielding, S. B. Penick & Co., Samuel Klein, Synfleur Scientific Laboratories, Inc. and George Tombak, E. I. du Pont de Nemours & Co.

An informal address was given at the first meeting by Arnold L. van Ameringen, van Ameringen-Haebler, Inc., in line with the society's policy of inviting guest speakers as well as having talks by members. Mr. van Ameringen paid tribute to the members of the perfume industry for their accomplishments during the war years and urged them to continue with emphasis on the creative work of which the American perfumer is capable. He stressed the importance

W. Dunney, Sr.

A. T. Frascati

W. H. Barlow

R. B. Houk

of self criticism in the art of perfumery and urged the perfumers not to be satisfied with anything except the best either in raw materials or in the results of their creative ability. He also gave an interesting and amusing sketch of the early history of perfume compounding and compounds in general when the hub of the essential oil industry was located in Platt and Pearl Streets.

Regular dinner meetings of the society are scheduled for the third Wednesday evening of each month except in June, July and August. A permanent meeting place will be announced later.

Gloria Vanderbilt Files Plea

Listing assets of $163,288 against liabilities of $197,589, the Gloria Vanderbilt Corp., New York, N. Y., has petitioned for an arrangement with creditors under the national bankruptcy act in United States District Court. It is proposed that settlement of claims be in full, on the basis of 50 per cent in notes and 50 per cent in common stock. Mrs. Gloria Morgan Vanderbilt is president and director of the corporation.

M. E. Bouge Hopes To Keep Prices Down

M. E. Bouge, president of Bruno Court S. A., Grasse, France, arrived in the United States last month on the Queen Elizabeth to confer with officials of Naugatuck Aromatics, New York, N. Y. The latter firm represents Bruno Court in this country.

Mr. Bouge is president of the Syndicate of Essential Oil Producers of Grasse, and is also the son-in-law of the late A. Blanque, former president of Bruno Court. According to Mr. Bouge, the prices of floral products remain high due to the cost of production, but the Syndicate is striving to stabilize prices and avoid increases.

T.G.A. Releases Standards On Cosmetics Materials

The Toilet Goods Association has released standards for glyceryl monostearate, non-self-emulsifying; kaolin; oleic acid and castor oil. The Board of Standards of the Association suggests that all purchasers of these materials use these standards as minimum specifications. Copies may be obtained through H. D. Goulden, Director, Scientific Research and Standards.

beeswax . . .

PURE, WHITE
AND UNIFORM

BECAUSE IT'S

sunbleached

Still using the same "old fashioned" methods proven successful for 95 years.

That's how long we've been bleaching beeswax since we first began operations in Holland in 1852.

Preference for high quality today is as strong as it was then.

That's why our customers would not think of letting us change production methods to gain "speed."

This same high quality extends through our entire line:

U.S.P. Pure *Sunbleached* Beeswax
U.S.P. Pure Yellow Refined Beeswax
Ozokerite Ceresine
Micro Crystalline Petroleum Waxes
Special Wax Blends

KOSTER KEUNEN

★

Sayville, L. I., N. Y. Phone: Sayville 400

Natural and Aromatic
Raw Materials
Essential Oils

for

Perfumery •

Cosmetics •

Soap •

LAUTIER FILS

INCORPORATED

154-158 West 18th Street
New York, N. Y.

Grasse · Paris · London · Beyrouth

Manufacturers of Quality Raw Materials
For Perfumery For Over 100 Years

G. F. Mehren Heads Chicago Branch of Magnus, Mabee & Reynard

G. F. Mehren has been made general manager of the Mid-Western area by Magnus, Mabee & Reynard, Inc., New York, N. Y. His office is located at 221 North LaSalle St., Chicago, Ill. Prior to this appointment, Mr. Mehren was, for nine years, a member of MM & R's sales staff servicing accounts in Minnesota, Wisconsin, Northern Illinois and part of Chicago. One of his first acts, upon his appointment as general manager, was to announce that the sales staff would be augmented in conjunction with the company's expansion policy.

G. F. Mehren

Daggett & Ramsdell Presented "Certificate of Public Service"

Daggett & Ramsdell, New York, N. Y., has been added to the honor roll of business firms selected by the Brand Names Foundation to receive the "Certificate of Public Service" for the 57 years its brand name has "held public confidence through unfailing integrity, reliable quality and fair pricing."

The award was presented to William Bonyun at a luncheon at the Hotel Waldorf Astoria, April 18. The luncheon was attended by over 600 business and advertising executives.

Changes Proposed in Alcohol Tax Rules

The Federal Register for April 23 contains a number of changes proposed by the Bureau of Internal Revenue covering alcohol tax rules. Interested persons are invited to submit their views of the proposed changes in writing within thirty days of that date.

ADCAM Starts Season of Golf

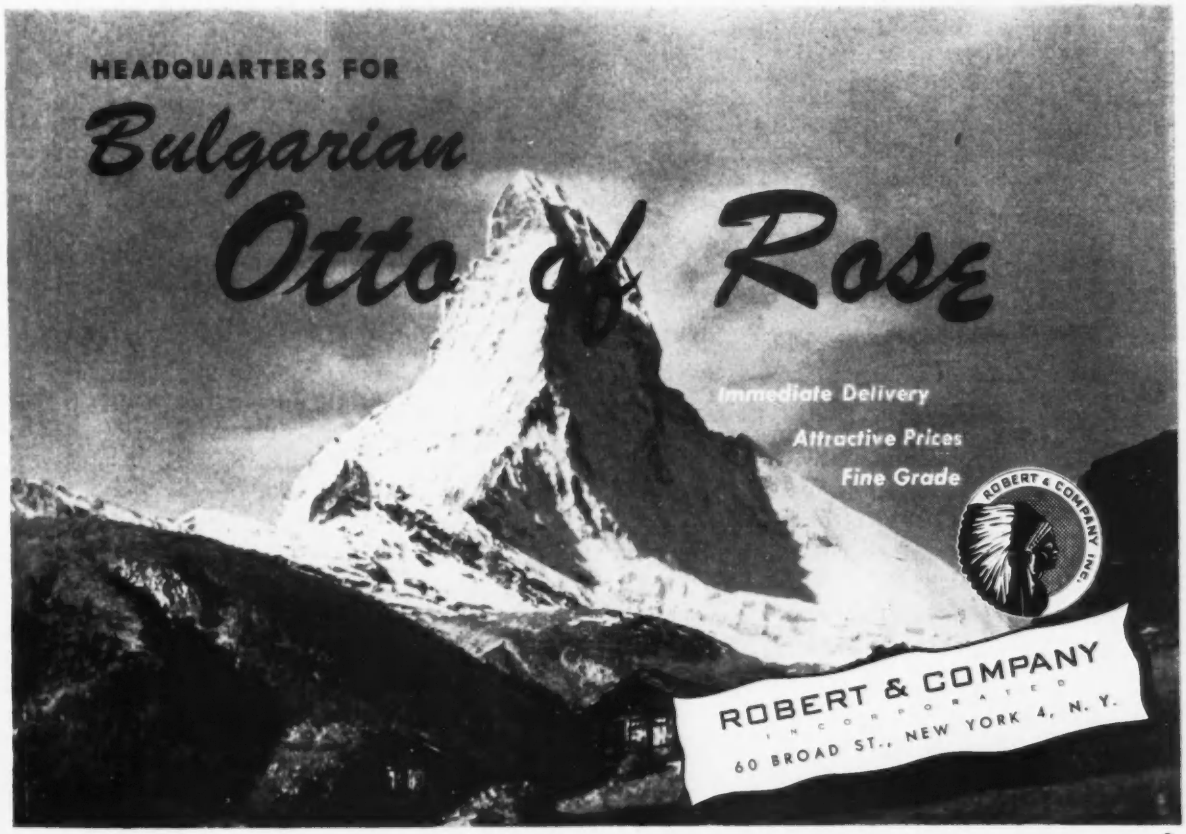
The Allied Drug and Cosmetic Association of Michigan opened the golf season April 22, at the Birmingham Country Club. Ray Maguire gave a short talk on the technical points of golf, and Don Manville showed some shorts on sports. The next meeting will be held May 27.

Dr. Guenther Reports on Essential Oils Production in Haiti

Dr. Ernest Guenther, vice-president and chief chemist of Fritzsche Brothers, Inc., New York, N. Y., has returned from a three weeks' visit to the West Indies. While in Haiti, Dr. Guenther traveled extensively through the interior and was greatly impressed by the promising work of Senator Louis Dejoie, who has turned the island into a heavy producer of lemongrass, vetiver, West Indian sandalwood and lime.

Ernest Guenther

Other oils are being experimented with, including citronella and geranium, and success in their production is fully expected, according to Dr. Guenther. In no other part of the Western Hemisphere, except perhaps Guatamala, Honduras and Brazil, has there been such profound and sincere effort to establish an essential oil industry as in the little Republic of Haiti.



The most discriminating manufacturers of cold wave solutions say that **EXTRACTED THIOGLYCOLIC ACID** (ammonium thioglycolate) guarantees less odorous and faster acting solutions than any other form of thioglycolic acid. Noteworthy too, are claims of greater stability and lovelier, tighter ringlets.

STANTON'S AMMONIUM THIOGLYCOLATE is sufficiently moderate in price to permit you to afford this superior material for your cold wave solutions. Always delivered according to Stanton's guaranteed specifications, or better, our **EXTRACTED THIOGLYCOLIC ACID** will solve your many problems connected with this important product for the beauty industry.

For greater eye-appeal, increased sales, use our stable emulsifiers to "cream" your solution.

EXPORT BROKERS INQUIRIES INVITED

STANTON LABORATORIES

STANTON LABORATORIES, INC.

227 Krams Avenue, Philadelphia, Pa.

(Plant & Main Office)

JUST PUBLISHED!

MARKETING DRUGS & COSMETICS

By Louis Bader, Ph.D. & Sidney Picker, M.C.S.

This complete handbook on the drug and cosmetic industry will help solve the many merchandising problems of manufacturers, wholesalers and retailers.

It explains how best to introduce new products, how to get the most out of advertising, how to arrange displays that sell by themselves, and how to apply hundreds of other means of moving merchandise profitably.

Here are painstaking directions for packaging products, explaining the importance of size, shape, style, color, design and materials.

Included also are the capital requirements necessary to the establishing of a business in the drug and cosmetic field, together with full, practical information for every business operation in the industry.

Only $5.00 postpaid—order your copy today from

robbins publications book service

9 East 38th Street — New York 16, N. Y.

We Can Supply The Following Books

American Soap Maker's Guide (Meerbott & Stanislaus)	$7.50
Chemical Formulary (Bennett) Vol. VII	7.00
Chemistry and Manufacture of Cosmetics (de Navarre)	8.00
Commercial Methods of Analysis (Snell & Biffen)	6.50
Condensed Chemical Dictionary	12.00
Drug & Specialty Formulas (Belanger)	6.00
Surface Active Agents (Young & Coons)	6.00
Flavor (Crocker)	3.00
National Formulary, VIII	7.50
Perfumes, Cosmetics & Soaps (Poucher) Vol. I	8.00
Perfumes, Cosmetics & Soaps (Poucher) Vol. II	8.00
Perfumes, Cosmetics & Soaps (Poucher) Vol. III	7.00
Practical Flavoring Extract Maker (Kessler) water damaged	2.00
Substitutes (Bennett)	4.00
The Law of Foods, Drugs & Cosmetics (Toulmin) One Large volume, 1460 pages	17.50
The Subtle Sense (Ralph Bienfang)	2.00
Henley's Twentieth Century Book of Recipes, Formulas and Processes	4.00
U. S. Dispensatory XXIII	15.00

ROBBINS PUBLICATIONS BOOK SERVICE

9 E. 38th St., New York 16, N. Y.

W. T. Badcock

L. A. Romani

G. R. Wood

V. K. Galitz

D. H. Bush

R. L. Williams

Aromatic Products Adds Six Former Servicemen

Six former servicemen have been appointed as additional representatives of Aromatic Products, Inc., New York, N. Y.

George R. Wood has been appointed branch manager for the Midwestern territory. He has worked out of the Chicago office for over a year. Mr. Wood will be assisted by Vernon K. Galitz, who will serve Northside Chicago as well as Northern Illinois and Wisconsin.

Walter T. Badcock joins the firm after four years in the Navy and will handle accounts in New York, N. Y., and New Jersey.

Louis A. Romani expands his activities to cover accounts in Upper New York State and the Metropolitan area.

The newly appointed service representative for the New England territory, which includes Connecticut, Rhode Island and Massachusetts, is Robert L. Williams. Donald Bush joins the company as representative for Eastern Pennsylvania, Maryland and the District of Columbia.

Toilet Goods Manufacturers Assn. Sets Convention Date

The annual convention of the Toilet Goods Manufacturers Association of Canada will be held June 19th to 24th, at Manoir Richelieu, Murray Bay, P. Q.

Alden Ludlow, Jr., Heads Solicitation Drive

Alden R. Ludlow, Jr., of U. S. Industrial Chemicals, Inc., New York, N. Y., is chairman of a group to organize solicitations in the chemical industry for the Greater New York Fund. The drive opened April 29.

Mutual Sales Company Incorporates

Officers of the Mutual Sales Co., Toronto, Canada, have announced the incorporation of the business under Mutual Sales Co., Ltd. Howard L. Clemes has been appointed vice-president and general manager, and A. F. Collins has become president.

BENJ. FRENCH, INC.

ESSENTIAL OILS **AROMATIC CHEMICALS**

DESCOLLONGES

PRODUCTS

JASMAROME

LILAC FLEURS B

LILY OF THE VALLEY 46

ROSOFLOR

ALDOLIN

160 FIFTH AVENUE NEW YORK 10, NEW YORK

ALROSOL

A Cosmetic Natural!

ALROSOL is a naturally helpful additive to your hair preparations, cleansing preparations, shaving preparations, lotions, acid creams, face packs, deodorants and dentifrices. A *superior cosmetic detergent*, it acts as a *water softener, wetting and rewetting agent, emulsifier, thickening* and *dispersing agent.*

5% ALROSOL in shampoo soaps permits increased cleansing and softening, and when added to many synthetic surface active agents used in shampoos will greatly improve the lathering properties. ALROSOL also improves wave sets, wave solutions and depilatories.

In bath preparations ALROSOL produces rich, stable foam in hardest water, and prevents formation of soapy layers and undesirable water precipitates.

ALROSOL treated cleansing creams are less greasy, more detergent and penetrating, and are readily removed by water.

Ask for illustrated booklet "ALROSOL Makes Good Cosmetics Better!"

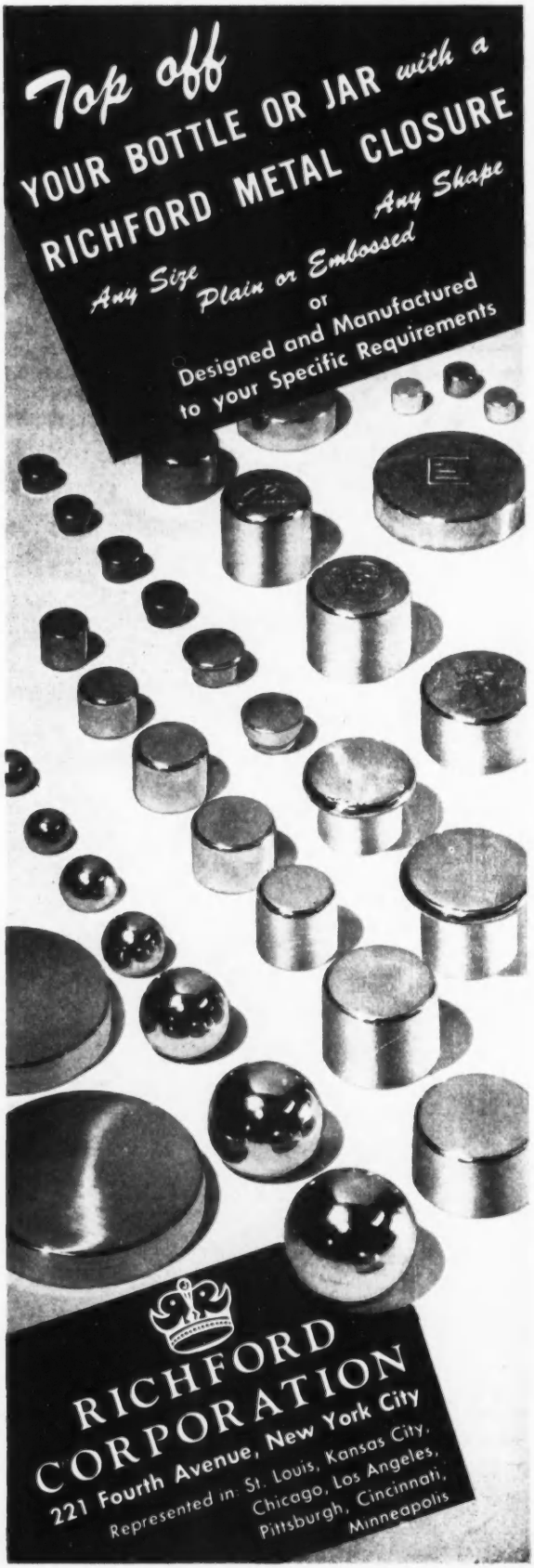
Write for a sample of Alrosol

THE ALRO LINE

ALROSE CHEMICAL COMPANY

Manufacturing and Research Chemists

PROVIDENCE 1, RHODE ISLAND



Raymond Barbas and Family Visiting in U. S.

Raymond Barbas, president of Jean Patou, his wife, sister of the late Jean Patou, and their daughter, Kiki, arrived last month on the Queen Elizabeth for a three week's visit in the United States.

Mr. Barbas was in this country in 1945, when, as president of the Export Division of the French Couturier Association, he was sent to aid in the re-establishment of trade between countries. At one time, he was doubles player on the French Davis Cup Team, and is also holder of the Paris-Nice motor speed record for automobiles.

The Carl Schnefels Celebrate Fiftieth Wedding Anniversary

Mr. and Mrs. Carl Schnefel were feted by their family and friends upon the celebration of their fiftieth wedding anniversary recently. Mr. Schnefel is one of the original founders of Schnefel Brothers. He and Mrs. Schnefel met when they were both working for the original company. Their residence is in Newark, N. J.

"It's A Buyers' Market—So What?" That was the subject of a panel discussion at the Cosmetic Division luncheon meeting of the Fashion Group, held April 2 at the Hotel Biltmore, New York, N. Y. Seated at the speakers table from left to right are: Kay Brown, S. L. Mayham, Leonore Buehler, Norman F. Dahl and Frank R. Hale.

U. S. Industrial Chemicals Holds General Sales Meeting

All sales divisions and departments of U. S. Industrial Chemicals, Inc., New York, N. Y., were represented at a general sales meeting of the company held recently in New Orleans.

G. L. Haskell, president spoke at the opening session on the general business accomplishments and the future outlook of the company. L. A. Keane, vice-president in charge of sales, discussed the general sales situation, while managers of the various sales departments reviewed progress in their particular fields.

OIL ORRIS ROOT LIQUID ABSOLUTE

ORRIS CONCRETE

ORRIS OLEORESIN *(Resinoid)*

Experience demonstrates that none of the substitutes for Orris are wholly satisfactory in giving the characteristic Orris note. It is therefore fortunate that these well known Bush specialties are now readily available.

W. J. BUSH & CO., Inc.

ESSENTIAL OILS . . . AROMATIC CHEMICALS . . . NATURAL FLORAL PRODUCTS

11 EAST 38TH STREET, NEW YORK 16, N. Y.

LINDEN, N. J. **NATIONAL CITY, CAL.**

LONDON **MITCHAM** **WIDNES**

HILARY SAYS:

A "FIRST-CLASS-STINK"—could be entirely composed of words and verbs—and be quite personall It might be swell entertainment for non-participating members, known as Innocent By-standers. Writing about it might delight the printer's heart and amuse some readers—but contain expressions not allowed by United States Postal Regulations and offend the ethics and morals of general publishing practices.

It could also be the ugly after-note of heptyl aldehyde (C 7),—from which all amyl cinnamic aldehydes must be made.

AFTER cooking in my little pot —and stewing a bit—an amyl cinnamic aldehyde was reprocessed and redistilled. Now that the soup is ready for serving,—it's called F L A S O L E E. The ugly chemical after-note of heptyl aldehyde (C 7) is eliminated.—Plenty fine!

PERFUMES that have a flowery note mostly all contain amyl cinnamic aldehyde. FLASOLEE has a "waxy" note, as found in Jasmin Absolute;—it also has a "green" note. What more do you want? With two notes, make a notation: It has greater strength than "regular" amyl cinnamic aldehyde;—and it's smoother and more flowery. Make another note (or tie a string around your finger): Try FLASOLEE in any flower-compound, substituting it for a regular amyl cinnamic aldehyde;—try it, say, in a Jasmin Compound. (Min will say "Jas"—and come to life!) It's yoost good schtuff!

SAY,—I gotta go,—an' when I gotta go,—I GOTTA GO! But I'm not headed to where some tough guys told me I could go, when I asked 'em to stop shooting paper-spit-balls at the old lady crossing the street. I have to cross the border to see some of our Good Neighbors in Mexico City and Havana, Cuba.

BUT don't worry: Any orders for FLASOLEE will gladly be taken and promptly handled—during my absence (—and even when I get back)!

AFTER the Caribbean business —(maybe I'll bring a present for you when I return)—I have to celebrate!—Well? Wouldn't you—on your 18th Honeymoon—with the same wife? Yowsah! For 18 years she's put up with all my smells and yells. So—we're going to spark a bit in Miami Beach and raise a fine fuss.

Don't you fuss! If you want a fine flowery compound,—raise it to the highest point with F L A S O L E E.

J. HILARY HERCHELROTH

representing

Crosp Martineng **Established 1782** **Grasse, France**

369 Third Avenue — New York 16, N. Y.

In Havana Lainz y Cia Aguiar 615

KOMMON SCENTS!

Big League baseball comes as a relief from political bickering. It's a pleasure to hear about brawls and strikes that aren't blamed on Communists.

•

The new season opened with an upset of tradition. Before President Truman tossed out the first ball, ex-Senator Chandler threw out the first manager.

•

Season's loss of Leo Durocher is the greatest shock in Brooklyn since the public schools made English compulsory.

•

The Dodgers without Durocher are as frustratingly incomplete as baseball without the Dodgers. It's like mentioning Truman without Roosevelt, to use a parallel in opposites.

•

There's something heartwarming in going out to the ball park during business hours and seeing your office boy sitting a couple of rows ahead. Isn't it wonderful that his grandmother didn't really die on Opening Day!

•

Then, there's always the thrill of new faces in new seasons. Bing Crosby, for example. Many believe he influenced Hank Greenberg's change of plans. After all, how often can you get a boss sufficiently talented to sing duets with Al Jolson?

•

We're not overlooking an equally cogent reason for Greenberg's decision to play for the Pirates: He'd rather rap homers for Pittsburgh than parcels for Gimbel's.

•

And Bob Hope's stake in the American League Indians practically guarantees that his next movie will be called, "The Road To Cleveland." Hope's investment isn't exactly risky. But if anything happens to Bob Feller's arm, the first Bob will have to change the movie's title to, "The Road To Ruin."

•

Unlike football, baseball does not start each season with myriad rules changes. But with the current Congressional hysteria, we may expect to see a new position created, Deep Shortstop. Actually, this will be only a change of name. It's designed to appease conservative baseball fans who cringe at the word, Left-fielder.

•

Baseball and Cosmetics! How much these industries have in common! Each outfit hopefully opens the new season as a potential winner. And by July Fourth we're all chorusing:

"Wait 'til next year!"

George Fiedler

KELTON

Cosmetic Company

230 West 17th Street, New York 11, N. Y. — 763 So. Los Angeles St., Los Angeles 14, Calif.

Private Label Manufacturers Exclusively
Covered by Product Liability Insurance

L. Givaudan Issues Book Commemorating Fiftieth Anniversary

L. Givaudan & Cie, on marking the fiftieth anniversary of its founding by Leon and Xavier Givaudan, has issued a handsome and beautifully illustrated ninety-five page book.

In it are listed the sources from which the company obtains its raw materials. A most interesting development is a discussion of synthetics and how they are made. The history of cosmetics from the time of Cleopatra is discussed.

L. Givaudan & Cie. is the parent company of Givaudan - Delawanna. Inc., New York, N. Y.

Shown above are Delores Serra; her husband, Javier Serra, president of Les Parfums de Dana, Inc.; Jeanne Maurin, manager; Henri Costerg, vice-president; Arthur Kreinik, treasurer; Maurice Meunier, chief chemist; and members of the staff. The occasion was the company's annual party, held this year at the Vanderbilt Hotel, New York, April 29.

Prof. Bogert Honorary Member Of Assn. of Consulting Chemists

Professor Marston T. Bogert has been elected the first honorary member of the Association of Consulting Chemists and Chemical Engineers. He is on the chemical faculty of Columbia University.

In addressing the American Chemical Society, which held its convention in Atlantic City, N. J. recently, Professor Bogert spoke of the organization of the chemists of the world to contribute their knowledge to reconstruction and peace.

Meyer Katz Opens Distribution And Promotion Firm

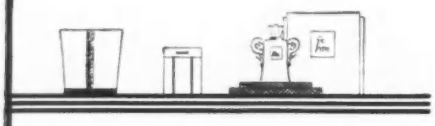
Meyer K. Katz has announced the formation of M. K. Katz & Co., Inc., Empire State Bldg., New York, N. Y. The company will engage in the development, distribution and promotion of merchandise for the retail trade, specializing in items for toilet goods departments. Mr. Katz was last associated with Volupte Compacts, Inc., and Herb Farm Shop, Ltd.

DELAY NO LONGER!
Write today for quotations and samples of

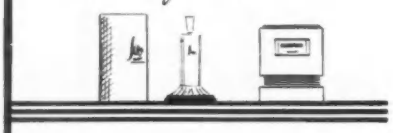
fine **LANOLINS**
and
ABSORPTION BASES

Interesting booklets on Lanolin and Absorption Bases offered free. Samples supplied on request.

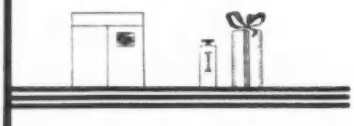
WRITE, PHONE OR CABLE DEPT. SA
THE LANAETEX PRODUCTS, INC.
151-157 Third Avenue Elizabeth 1, N. J.
Telephone: Elizabeth 2-7568—Cable: LANAETEX



there is no finer



cosmetic container



than a Karl Voss box.

Karl Voss Corporation
HOBOKEN NEW JERSEY

ESSENTIAL OILS
AND
AROMATIC PRODUCTS

Our Selection of the Month

EFFICIENCY · R · RELIABILITY

DANUBE

• A fabulous All-Purpose Perfume base which is subtly exciting and long lasting. (Trial Pound $10.00)

•

May we also call your attention to three other exquisite perfume compounds . . .

LAVENDER No. 3

CHYPRE No. 56

TUBEROSE No. 324

•

LEMONGRASS REPLACEMENT . . .

Scientifically produced Oil which possesses the character of the original at a fraction of the cost.

•

• Wire, 'phone or write . . .

Try us for quality, price, delivery, service. In addition to being direct importers, we also compound various standard and special items. Try us!

EDWARD REMUS & CO., Inc.
11 WEST 42nd STREET · NEW YORK 18, N. Y.
Cable Address: EDSUMER, NEW YORK
Mid-Western Office
806 DELAWARE ST. · KANSAS CITY 6, MO.

Solon Palmer Receives 100 Year Certificate

The Brand Names Foundation recently presented a Certificate of Public Service to Solon Palmer, New York, N. Y. for Palmer's Perfumes, introduced in 1847.

Harold Newson Joins Solvay Sales

Solvay Sales Corp., New York, N. Y., has added Harold Newson to its promotion and advertising staff. Mr. Newson was formerly associated with the Schnell Publishing Co.

Ross and Rowe In New Office

Ross & Rowe, Inc., has announced the removal of its main office to 50 Broadway, New York, N. Y. The Chicago office will remain in the Wrigley Bldg., Chicago, Ill.

Rene Forster, Inc., Becomes Allondon, Inc.

Rene Forster, Inc., New York, N. Y., has announced a change in firm name to Allondon, Inc., with offices located at 66 Dey St., New York, N. Y. The telephone number is Cortland 7-1192. Rene Forster continues as president, and the same staff is maintained. At the present time Mr. Forster is on an extended business trip in Europe, where he will visit in Italy, Switzerland, France and Belgium.

Stoyanoff Becomes Guerlain Sales Manager

E. K. Stoyanoff has been appointed sales manager of Guerlain, Inc., 444 Madison Ave., New York, N. Y. Mr. Stoyanoff has been connected with Guerlain for eighteen years.

Obituary

Rowland Ringgold

Rowland Ringgold, assistant to the president, Magnus, Mabee & Reynard, Inc., New York, N. Y., died April 10 at the age of 71. He had joined the firm in 1937.

Ernest Vetterlein

Ernest Vetterlein of Norda Essential Oil & Chemical Co., Inc., died suddenly May 8. Prior to his association with Norda he was with P. R. Drever, Inc.

John H. Hadden

John H. Hadden, personnel manager of Fritzsche Brothers, Inc., New York, N. Y., died March 31, in Miami, Fla., at the age of 68.

Bernard Harry Badanes

Bernard Harry Badanes, vice-president of McKesson & Robbins, Inc., Bridgeport, Conn., in charge of general drug and sundries buying, died suddenly of a heart attack on April 22, while addressing a meeting of the National Wholesale Druggists' Assn. in Chicago. He was 63 years old, and had been associated with McKesson & Robbins for eighteen years.

Bert Dagger

Bert Dagger, manager of Arthur Irish Co., Ltd., Vancouver, B. C., died recently at the age of 41. Mr. Dagger, who had been a famous soccer player, was born in Troon, Scotland, and came to Canada in 1911. He is survived by his widow, Vida Dagger, daughter of Arthur Irish.

Edward A. Lessels

Edgar A. Lessels, retired traffic manager of Magnus, Mabee, Reynard, Inc., New York, N. Y., died April 21 in Lyndhurst, N. J., at the age of 83.

TOP-QUALITY COCOANUT OIL AND CASTILE

Shampoos

NOW AVAILABLE IN QUANTITY

- MADE WITHOUT CAUSTICS
- PERFECTLY NEUTRAL (pH 7)
- UNUSUALLY CLEAR AND THICK
- EXCEPTIONAL LATHER
- NO HAZING OR SEDIMENT

— AT COMPETITIVE PRICES —

If you are looking for a quality shampoo of exceptional merit, write for details and samples.

SAVON PRODUCTS COMPANY

Manufacturing Chemists

203 East 12 St., New York 3, N. Y.

Manufacturers of

Aromatic Chemicals

and

Perfume Compounds

gunning and gunning inc.

601 WEST 26th STREET, NEW YORK 1, N. Y.

USE INTERSTATE TECHNICAL AND CERTIFIED COLORS

OUTSTANDING EXCELLENCE

. . . That accounts for the popularity of Interstate Colors.

No matter what your color requirements are, consult us. Our expert advice will prove of great value to you.

CHLOROPHYLL • SAPONINE

INTERSTATE COLOR CO. INC.
3 BEEKMAN STREET, NEW YORK

Fine
AROMATIC CHEMICALS
ESSENTIAL OILS
and
COMPOUNDS

Aromatics Division
GENERAL DRUG COMPANY
125 Barclay St., New York 7, N. Y.
9 S. Clinton Street, Chicago 6
1019 Elliott Street, W., Windsor, Ont.

to give their products more sales appeal — more and more smart merchandising executives

ALWAYS SPECIFY LANOVA
superb specialty and box papers!

• Metal Foils • Fancy's • Embossed • Wood • Pyroxylin • Velours • Trade Marks • Flints.

INSTANT DELIVERY RIGHT FROM STOCK
on most items. Without obligation write today for sample sheets and books.

LACHMAN NOVASEL PAPER CORP.
109-111 Greene Street • New York 12, N. Y.

DISTINCTIVE COLOR PRINTING FOR THE TOILET GOODS INDUSTRY

Richard M Krause INC

DESIGNING–BOX WRAPS–LABELS • 50 EAST 19TH ST. NEW YORK 3, N. Y.

MARKET REPORT

Crude Glycerin Price Decline in View

THE downward curve in essential oil prices which had characterized the market for the past six weeks or more appeared to have leveled off somewhat toward the close of the period under review. Buyers, however, followed a rather cautious policy by reducing inventories and keeping a watchful eye on the market for fear of further price reductions.

TARTARIC ACID FROM ITALY

Tartrates, with the exception of rochelle salt and seidlitz mixture were reduced 3 to 5 cents per pound by major producers. The reduction was made just prior to the arrival of the largest shipment of tartaric acid from Italy since the beginning of World War II. As the result of the reduction, importers offered the foreign acid for export at prices ranging from 43¢ to 44¢ per pound in bond explaining that the duty of 8¢ per pound would make the cost of the goods prohibitive for domestic consumption. The reduction of tartrate prices by leading makers established the domestic market for the acid at 50 cents, in barrels, and 50½ cents per pound, in kegs.

Steadily rising costs of molasses and grain were reflected in a sharp advance in all formulae of industrial alcohol. The advance, amounting to 16 cents a gallon brought prices for carloads or smaller quantities to above $1 a gallon, a record high level since World War I. Shortly after the first World War, alcohol reached approximately $1.25 a gallon.

A further reduction carried anise oil prices to a new low level since importations were resumed from China. Cassia was likewise unsettled and some of the floral oils such as lavender, Bulgarian rose and geranium displayed an easier tone reflecting more favorable replacement costs. Stocks here have been finding a steady market, but the quantities afloat are expected to have a further easing affect upon the overall supply position here.

While there seemed to be an absence of any detailed reports, higher shipping prices on oil peppermint from the country were regarded here as an indication of some damage to the plants in the Michigan area recently hit by flash floods. The price of spearmint which is nearly seven times greater than normal, remained about unchanged although local houses explained that very little oil was obtainable here and the local market was largely a nominal affair.

Local representatives of the California Fruit Growers Exchange announced that they had been authorized to book contracts for oil lemon, USP XII, extending over a period of three months within certain quantity limitations at the current selling price of $3.50 per pound, in 25 pound cans, f.o.b., New York. Some fair quantities of lemon oil arrived here from Italy over the past month. Following slightly lower prices local houses reported an improved demand for the imported oil. All varieties of orange oil were scarce. Offerings from Florida were generally restricted and little Brazilian or California oil was available for immediate delivery.

The inactivity in Ceylon citronella oil finally gave way to a considerable amount of forward buying, following a downward price adjustment by major shippers in the primary center. Toward the close of the period spot prices lost ground with local houses announcing reductions of 25¢ to 30¢ per pound.

SPOT PRICES ON MENTHOL LOWER

Although spot prices on menthol moved lower, some houses were inclined to be rather bullish in their ideas concerning the longer term outlook. The easier trend in the spot market over the past month could be traced to a seasonal lull in demand and prospects of fair size arrivals from China early in May. New production in Brazil will be considerably less than it was last year, however, and following the receipt of fair quantities from China early this month (May) the possibilities of additional replacements seem rather poor. As far as can be learned there is nothing in sight from Japan.

In view of the recent action in tallow there was a growing feeling in trade circles to the effect that crude glycerin prices will possibly decline to a level representing a fair parity under the current quotations on refined material as quoted by three major producers.

If production of crude glycerin is maintained at the high rate of January and February, the year's output will total approximately 202,668,000 pounds (absolute basis) or higher than in any previous year which would go a long way in making the United States self-sustaining in the supply of this major basic material.

Last year, production of crude glycerin totaled 156,760,000 pounds. Production in the first two months of this year reached 33,778,000 pounds in contrast to 27,469,000 pounds produced in the same period of 1946. While February production dropped 372,000 pounds from the January output of 17,075,000 pounds, actually February production, on a daily basis, was at a higher rate than it was in January considering the short month and the number of holidays in that period. Factory and warehouse stocks rose from 42,388,000 pounds at the end of January to 43,132,000 pounds in February.

have you tried
BASE "93"

An acid emulsifier for non-rotting antiperspirant creams containing aluminum sulfate.

Write today for working samples and formulas.

CONTINENTAL CHEMICAL COMPANY

2640 Harding Ave. Detroit 14, Mich.

CYCLONOL

CHARACTERISTIC ODOR *and* COOLING EFFECT OF MENTHOL

Cyclonol is chemically 1-methyl-3-dimethyl-cyclohexanol-(5). Graphically the structural formula is given in Fig. 1. It may be considered a lower homologue of symmetric or meta Menthol which has the structural formula shown in Fig. 2.

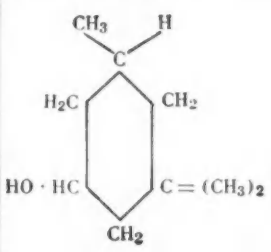


FIG. 1

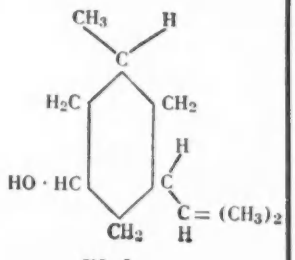


FIG. 2

Cyclonol replaces Menthol satisfactorily in shaving creams and lotions, liniments, analgesic balms, ointments and similar preparations. It has also been accepted by the U. S. Treasury Department as a Denaturant for alcohol in place of Menthol U.S.P.

W. J. BUSH & CO., INC.

LICENSED DISTRIBUTORS

11 EAST 38th ST. NEW YORK 16, N. Y.

NEED COCOA BUTTER?

TRY OUR

ODORLESS COCOA BUTTER SUBSTITUTE

(purely vegetable)

Immediately available

Sample on request

50 lb. minimum—60¢/lb.

500 lb. minimum—58¢/lb.

fob N.Y.C.

R. F. REVSON CO.

144 W. 18th St. N. Y. C. 11, N. Y.

Cable address—Coschems, N. Y.

TL Beeswax

- PURE WHITE
- EXTRA QUALITY
- ABSOLUTELY PURE
- ABOVE U.S.P. STANDARDS

● Samples will gladly be sent on request—at no obligation

Serving The Trade for 95 Years

THEODOR LEONHARD WAX CO., INC.

HALEDON, PATERSON NEW JERSEY

Western Distributor: A. C. Drury & Co., 219 E. North Water St., Chicago, Ill.

Founded 1854

FEZANDIE & SPERRLE, Inc.

205 Fulton Street, New York City

HIGHEST STANDARD

Colors and Dyes for Cosmetics, such as

LIPSTICKS	PERFUMES
ROUGES	LOTIONS
FACE POWDERS	SHAMPOOS
MASCARA	CREAMS
SOAPS	Etc.

◆

Your inquiries are invited

Cosmetics **and HOW TO MAKE THEM**

By Robert Bushby . . . 3rd Edition, 1945 . . . $3.00 postpaid.

This simply written, practical guide for beauty specialists, hairdressers and all others concerned with preparation of face powders, vanishing creams, nail polishes, rouges, lipsticks and other cosmetics is a useful handbook for those who have had no previous knowledge of chemistry. Contains easy-to-follow formulas and recipes. Illustrated.

Order today from

ROBBINS PUBLICATIONS BOOK SERVICE

9 E. 38th St., New York 16, N. Y.

PRICES IN THE NEW YORK MARKET

(Quotations on these pages are those made by local dealers, but are subject to revision without notice)

ESSENTIAL OILS

Almond Bit, per lb.	4.75@	4.90
FFPA	4.50@	5.25
Sweet True	.90@	1.10
Apricot Kernel	.80@	.85
Amber, rectified	2.25	Nom'l
Angelica Root	120.00@	185.00
Anise, U. S. P.	.95@	1.25
Imitation	1.75@	2.10
Aspic (spike) Span.	2.00@	2.50
Avocado	1.35@	1.40
Bay	1.35@	1.60
Bergamont	5.50@	5.85
Artificial	3.75@	5.25
Birch, sweet	2.50@	4.50
Birchtar, crude	5.50	Nom'l
Birchtar, rectified		Nominal
Bois de Rose	3.95@	4.15
Cade, U. S. P.	.80@	.85
Cajeput	2.90	Nom'l
Calamus	20.00@	22.00
Camphor "white" dom.	.65@	.90
Cananga, native	9.15@	9.85
Rectified	11.00@	11.85
Caraway	5.65@	6.10
Cardamon	25.50@	26.00
Cassia, rectified, U. S. P.	3.50@	3.75
Imitation	3.00@	3.15
Cedar leaf	1.10@	1.25
U. S. P.	2.50@	2.85
Cedar wood	1.00@	1.15
Celery	17.50@	18.50
Chamomile Roman	250.00@	
Cinnamon bark oil	35.00@	42.00
Citronella, Ceylon	2.00@	2.50
Java type	4.60@	4.95
Cloves, Zanzibar	1.55@	1.60
Coriander	19.50@	21.00
Imitation	12.00@	14.00
Croton	4.75@	5.00
Cumin	8.50@	9.25
Dillseed	7.00	Nom'l
Erigeron	2.25@	5.00
Eucalyptus	1.15@	1.45
Fennel, Sweet	3.75@	4.50
Geranium, Rose, Algerian	15.75@	17.25
Bourbon	14.25@	20.00
Turkish	9.00@	9.75
Ginger	10.00@	12.00
Guaiac (Wood)	2.80@	3.00
Hemlock	2.60@	3.25
Substitute	.55@	.60
Juniper Berry	6.25@	7.10
Juniper Wood, imitation	.65@	.70
Laurel	5.00	Nom'l
Lavandin	3.25@	3.80
Lavender, French	9.25@	15.25
Lemon, Calif.	3.50@	
Italian	3.60@	4.00
Lemongrass	2.90@	3.25
Limes, distilled	5.75@	6.80
Expressed	12.25@	13.10
Linaloe	3.90@	4.50
Lovage	95.00	Nom'l
Marjoram	5.65@	6.20
Neroli, Bigarde P.	350.00@	390.00
Petale, extra	265.00@	300.00
Olibanum	10.50@	12.00
Opopanax	37.50@	39.00
Orange, bitter	3.50@	3.95
Brazilian	1.70@	2.00
Calif., exp.	1.90@	2.00
Orris Root, abs. (oz.)	135.00@	
Artificial	36.00@	40.00
Pennyroyal, Amer.	3.25@	3.75
European	4.75@	5.15
Peppermint, natural	8.00@	8.35
Redistilled	8.60@	8.85
Petitgrain	3.35@	3.90
Pimento Berry	7.00@	7.60
Pinus Sylvestris	4.25@	5.00
Pumillonis	4.25@	4.75
Rose, Bulgaria (oz.)	40.00@	48.00
Synthetic, lb.	50.00@	55.00
Rosemary, Spanish	1.35@	1.75
Sage	2.50@	3.25
Sage, Clary	17.00@	20.00
Sandalwood, N. F.	16.85@	17.25
Sassafras, artificial	.65@	.70
Ocotea Cymbarum	1.00@	1.10
Snake root	22.00@	25.00
Spearmint	14.50@	15.00
Thyme, red	2.85@	3.25
White	3.10@	3.50
Valarian	40.00@	45.00
Vetivert, Java	35.00@	37.50
Bourbon	35.00@	40.00
Wintergreen	6.00@	17.25
Wormseed	5.35@	6.00
Ylang Ylang, Manila	38.00	Nom'l
Bourbon	15.00@	24.00

(Continued on page 543)

CODAN

GERARD J. DANCO, INC.

3 EAST 44th STREET • NEW YORK 17, N. Y.

TELEPHONE: VANDERBILT 6-0981 CABLE ADDRESS: CODAN, N. Y.

FINE ESSENTIAL AND FLORAL OILS
AROMATIC CHEMICALS
MUSK—CIVET—AMBERGRIS

EXCLUSIVE AGENTS IN THE UNITED STATES AND CANADA FOR

PAYAN & BERTRAND, S.A. • GRASSE, FRANCE

DIRECT CONNECTION WITH THE BELGIAN CONGO SINCE 1893

"QUALITY MERCHANDISE GUARANTEED BY REPUTATION"

Use LABELS & SEALS by JOHN HORN for greater sales appeal

FAITHFUL SERVICE FOR OVER FORTY YEARS

METAL · EMBOSSED
ENGRAVED
DIE STAMPING FOR BOXMAKERS

JOHN HORN 835-839 TENTH AVE., NEW YORK 19, N.Y.
DIE STAMPING ENGRAVING EMBOSSING
Telephone: COLUMBUS 5-5600 ★ Cable Address HORNLABELS NEW YORK

ATTENTION - PERFUMERS

Adjust Your Formulae By Using Our

SUBSTITUTES of PROVEN MERIT

Hydroxy Citronellal
Geraniol
Citronellol
Rhodinol

AVAILABLE

Other Replacements For Aromatic Chemicals, Essential, and Flower Oils

SOAP and COSMETIC PERFUMES
INDUSTRIAL ODOR MASKS

Samples on Request

SEELEY & CO., INC.

136 Liberty St. - New York 6, N. Y.

Factories & Warehouses

Farmingdale, L. I., N. Y. Nyack, N. Y.
Los Angeles, Calif.

TURNER TUBES

SMART
MODERN
DURABLE
UNIFORM
COLORFUL

Manufacturers of COLLAPSIBLE TUBES since 1898

TURNER WHITE METAL CO., Inc. . . . New Brunswick, N. J.

CONSOLIDATED

Established 1858 FRUIT JAR CO.

NEW BRUNSWICK, NEW JERSEY

SHEET METAL GOODS : CORK TOPS : SPRINKLER TOPS : DOSE CAPS

Just Received—

from CZECHOSLOVAKIA
CRYSTAL PERFUME BOTTLES

Diamond cut ground glass stoppers, cut edges, hand polished. Actual photographs upon request. One-fourth to one ounce. Private molds if desired.

ALBERT R. BENNETT, IMPORTER

1036 N. Dearborn St. Chicago 10, Illinois

(Continued from page 541)

TERPENELESS OILS

Bergamot	13.00@ 16.00
Grapefruit	65.00 Nom'l
Lavender	19.00@ 22.00
Lemon	40.00@ 45.00
Lime, ex.	85.00@100.00
Distilled	57.00@ 60.00
Orange sweet	110.00@135.00
Peppermint	14.00@ 14.50
Petitgrain	7.25@ 8.00
Spearmint	18.00@ 20.00

DERIVATIVES AND CHEMICALS

Acetaldehyde 50%	1.90@ 2.75
Acetaphenone	1.65@ 1.80
Alcohol C 8	4.25@
C 9	14.00@
C 10	4.25@
C 11	Nominal
C 12	4.25@
Aldehyde C 8	11.00@ 12.00
C 9	19.50@ 20.00
C 10	7.50@ 10.00
C 11	2200@ 24.00
C 12	15.50@ 17.00
C 14 (so called)	9.50@ 9.75
C 16 (so called)	7.65@ 8.25
Amyl Acetate	.55@ .75
Amyl Butyrate	.95@ 1.10
Amyl Cinnamate	4.50@ 5.80
Amyl Cinnamate Aldehyde	2.35@ 2.80
Amyl Formate	1.00@ 1.25
Amyl Phenyl Acetate	5.95@ 6.15
Amyl Salicylate	.87@ .90
Amyl Valerinate	2.00@ 2.25
Anethol	.80@ 1.15
Anisic Aldehyde	2.60@ 3.25
Benzophenone	1.15@ 1.30
Benzyl Acetate	.65@ .75
Benzyl Alcohol	.75@ 1.00
Benzyl Benzoate	1.05@ 1.20
Benzyl Butyrate	2.00@ 2.25
Benzyl Cinnamate	4.00@ 4.30
Benzyl Formate	2.35@ 2.60
Benzyl-Iso-eugenol	9.00@ 9.75
Borneol	1.80 Nom'l
Bornyl Acetate	2.25 Nom'l
Bromstyrol	5.75@ 6.35
Butyl Acetate	.19½@ .19¾
Cinnamic Alcohol	3.00@ 3.60
Cinnamic Adlehyde	1.00@ 1.10
Cinnamyl Acetate	4.75@ 5.50
Cinnamyl Butyrate	12.00@ 14.00
Cinnamyl Formate	10.00@ 13.00
Citral, C. P.	7.25@ 7.75
Citronellol	9.60@ 10.00
Citronellyl Acetate	9.25@ 12.00
Coumarin	3.00@ 3.50
Cuminic Aldehyde	7.75@ 10.00
Diethylphthalate	.38@ .40
Dimethyl Anthranilate	4.55@ 5.00
Ethyl Acetate	.33@ .35
Ethyl Anthranilate	5.50@ 7.00
Ethyl Benzoate	.75@ 1.00
Ethyl Butyrate	.70@ .90
Ethyl Cinnamate	3.25@ 3.80
Ethyl Formate	.65@ .75
Ethyl Propionate	.90@ 1.00
Ethyl Salicylate	.90@ 1.00
Ethyl Vanillin	6.75@ 6.80
Eucalyptol	3.00@ 3.50
Eugenal	2.60@ 3.35
Geraniol, dom.	8.35@ 9.00
Geranyl Acetate	7.85@ 8.25
Geranyl Butyrate	10.25@ 10.75
Geranyl Formate	12.50@ 14.00
Heliotropin, dom.	3.10@ 3.75
Hydrotropic Aldehyde	7.25@ 7.75
Hydroxycitronellal	17.25@ 17.65
Indol, C. P.	20.00@ 23.00
Iso-borneol	1.30@ 1.50
Iso-butyl Acetate	1.05@ 1.75
Iso-butyl Benzoate	1.35@ 2.50
Iso-butyl Salicylate	2.35@ 3.00
Iso-eugenol	3.50@ 4.00
Iso-safrol	1.50@ 2.00
Linalool	6.75@ 7.25
Linalyl Acetate 90%	7.50@ 8.25
Linalyl Anthranilate	15.00@
Linalyl Benzoate	10.50@
Linalyl Formate	13.00@ 15.00
Menthol	8.35@ 8.75
Methyl Acetophenone	1.40@ 1.80
Methyl Anthranilate	2.25@ 2.40
Methyl Cellulose, f.o.b., shipping point	.60 Nom'l
Methyl Cinnamate	2.30@ 3.25
Uethyl Eugenol	4.00@ 6.25
Methyl Heptenone	3.50 Nom'l
Methyl Heptine Carbonate	45.00@ 60.00
Methyl Iso-eugenol	5.85@ 10.00
Methyl Octine Carbonate	24.00@ 30.00
Methyl Naphthyl Ketone	3.25@ 3.40
Methyl Phenylacetate	3.00@ 4.10
Methyl Salicylate	.42@ .45
Musk Ambrette	Nominal
Ketone	4.95@ 5.50
Xylene	1.70@ 2.05
Neroline (ethyl ether)	2.70 Nom'l
Paracresol Acetate	2.25@ 2.80
Paracresol Methyl Ether	2.60@ 2.85
Paracresol Phenyl-acetate	4.75@ 5.25
Phenylacetaldehyde 50%	2.75@
100%	4.15@ 4.60
Phenylacetic Acid	1.75@ 2.25
Phenylethyl Acetate	2.40@ 3.10
Phenylethyl Alcohol	3.40@ 3.60
Phenylethyl Anthranilate	16.00@

(Continued on page 545)

PLYMOUTH WAXES *for* CREAMS

This Spermaceti should not be confused with inferior hydrogenated sperm oils which are sometimes offered as Spermaceti The Plymouth Brand is the finest which can be produced and is produced from Genuine Sperm Oil by the cold pressing method. It is a very white crystalline wax containing no free oil, has a very low Iodine number and is free of any offensive odors.

PLYMOUTH Ozokerites

We offer two grades One is the highest quality obtainable, 76°-78° C melting point and the other grade lower in price and of lower melting point 66°-68° C. Both are guaranteed 100% Pure Bleached Ozokerites.

PLYMOUTH Sun-bleached White Beeswax U. S. P.

This is guaranteed to be a 100% Pure Beeswax and sun-bleached It is refined by the centrifugal method which removes all and every trace of foreign matter We will gladly send samples.

PLYMOUTH White Cirine Wax

A special grade of White Ceresin Wax prepared for the cosmetic trade Absolutely white and odorless. It has a melting point corresponding to that of Beeswax so that in using it in connection with Beeswax in cream any "lumpiness" is avoided. Its use will also produce a very glossy cream.

We offer all grades of the U S. P fully-refined Paraffin Waxes.

A COMPLETE LINE OF COSMETIC RAW MATERIALS

M. W. PARSONS

Imports

and PLYMOUTH ORGANIC LABORATORIES, Inc.

another
"SHOPPER STOPPER"
by Braun

Elegance and a note of the bizarre! Braun's Oblong Crystal Perfume bottle (a stock design available in several sizes) and striking packaging are deftly blended by Sardeau.

W. BRAUN CO.
316 N. CANAL ST. • CHICAGO 6, ILL.
347 FIFTH AVE. • NEW YORK 16, N. Y.

For **Non-Greasy**
Insect repellent bases
Try

R·T·VANDERBILT·CO·N·Y·S·A·
VEEGUM
AMERICAN PRODUCTS

VEEGUM is compatible with commonly used insect repellents. Stable, quick spreading creams and lotions are being made with VEEGUM.

Literature and samples available on request

R. T. VANDERBILT CO., INC.
Specialties Department
230 PARK AVENUE, NEW YORK 17, N. Y.

New! *Outstanding!*
AMERCHOL L-101

A LIQUID CHOLESTEROL EMULSIFIER PROVIDING UNUSUAL SKIN BENEFITS

NON-IONIC CHOLESTEROL in its most active and efficient form.

- Emollient, completely stable.
- For oil-in-water and water-in-oil creams, ointments and lotions.

AMERCHOL L-101 is one of many new Amerchols manufactured from specially processed Cholesterol and other sterols and will help you improve your products.

Our research laboratories are available to you for advice and information.

AMERICAN CHOLESTEROL PRODUCTS
Incorporated
MILLTOWN, NEW JERSEY
Sales Office—40 Exchange Place—New York 5, N. Y.

HAVE YOU READ

about fluorine and dental caries on page 477?

Timely features like this one appear in every issue of The American Perfumer. If you're not a subscriber, fill out this coupon. You'll get your personal copy of The American Perfumer for the next year.

THE AMERICAN PERFUMER
9 East 38 St., New York 16, N. Y.

Please enter my subscription to THE AMERICAN PERFUMER.
( ) Check for $3.00 enclosed.
( ) Bill me for $3.00.

Name
Position
Company
Address
Zone State

(Continued from page 543)

Phenylethyl Butyrate	4.65@	5.00
Phenylethyl Propionate	3.90@	4.40
Phenylethyl Valerianate	7.50@	8.10
Phenylpropyl Acetate	5.50@	5.70
Safrol	1.45@	1.60
Scatol C. P. (oz.)	5.35@	6.00
Styrolyl Acetate	2.65@	3.00
Vanillin (clove oil)	4.50@	4.65
(guaiacol)	3.00@	3.05
Lignin	3.00@	3.05
Vetivert Acetate	75.00@	80.00
Violet Ketone Alpha	18.00	Nom'l
Beta	15.00	Nom'l
Methyl	6.50	Nom'l
Yara Yara (methyl ester)	2.00@	3.10

BEANS

Tonka Beans Surinam	.85@	.95
Angostura	1.70@	1.80
Vanilla Beans		
Mexican, whole	10.50@	12.00
Mexican, cut	9.00@	9.50
Bourbon	7.75@	8.00
Tahati	4.50@	5.00

SUNDRIES AND DRUGS

Acetone	.09@	.12
Almond meal	.25@	.35
Ambergris, ounce	8.50@	18.00
Balsam, Copaiba	.95@	1.20
Peru	1.10@	1.30
Beeswax bleached, pure U. S. P.	.70@	.71
Yellow, refined	.64@	.65
Bismuth, subnitrate	2.15@	2.28
Borax, crystals, carlot ton	55.50@	58.00
Boric Acid, U. S. P., ton	129.00@	133.50
Calamine	.18@	.20
Calcium, phosphate	.08@	.08¾
Phosphate, tri-basic	.0635@	.0680
Camphor, domestic	.76@	.96
Castoreum, natural	12.00@	13.00
Cetyl, Alcohol	2.25@	2.55
Chalk, precip. bags, clts.	.02⅞@	.03
Cherry Laurel Water, jug, gal.	2.10@	2.50
Citric Acid	.23@	.26
Civet, ounce	8.00@	22.00
Cocoa, Butter, bulk	.38@	.40
Cyclohexanol (Hexalin)	.21½@	.22
Fuller's Earth, Mines ton	27.00@	30.00
Glycerin, C. P.	.50¼@	.50¾
Gum Arabic, white	.29@	.32
Amber	.14¾@	.16
Powdered, U.S.P.	.19½@	.21
Gum Benzoin, Siam	4.00@	4.50
Sumatra	.70@	.80
Gum Galbanum	1.25@	1.50
Gum Myrrh	.48@	.50
Henna, pwd.	.35@	.40
Kaolin	.05@	.07
Labdanum	5.00@	7.00
Lanolin, hydrous	.25@	.26
Anhydrous	.28@	.29
Magnesium, carbonate	.11@	.12¼
Stearate	.51@	.53
Musk, ounce	28.00@	55.00
Olibanum, tears	.26@	.35
Siftings	.12½@	.14
Orange Flower Water, gal.	1.75@	2.25
Orris Root, Italian	.24@	.35
Paraffin	.04@	.06
Peroxide (hydrogen) N.S.P. bbls.	1.10@	1.75
Petrolatum, white	.07¼@	.09¾
Quince Seed	1.65@	1.90
Rice Starch	Nominal	
Rose Leaves, red	3.45@	4.00
Rose Water, gal.	6.50@	8.00
Rosin, M. per cwt.	10.00@	11.25
Salicylic Acid	.40@	.42
Saponin	1.75@	2.00
Silicate, 40°, drums, works, 100 pounds	.95@	1.20
Soap, neutral, white	.20@	.25
Sodium Carb. 58% light, 100 pounds	1.60@	2.70
Hydroxide, 76% solid, 100 pounds	2.90@	3.75
Spermaceti	.54@	.55½
Stearate Zinc N.S.P.	.50@	.52
Styrax	1.10@	1.60
Tartaric Acid	.50@	.50½
Tragacanth, No. 1	4.00@	4.75
Triethanolamine	.19½@	.20½
Violet Flowers	2.00	Nom'l
Zinc Oxide, U. S. P. bbls.	12¾@	.14

OILS AND FATS

Castor No. 1, tanks	.32@	
Cocoanut, Ceylon type, c.i.f., tanks	.19@	.21
Corn, crude, Midwest, mill, tanks	.24@	
Corn Oil, distilled, tanks	.30@	.32
Cotton, crude, Southeast, tanks	.32@	
Grease, white	.22@	
Lard, Chicago	.33½@	.34
Lard Oil, common, No. 1 bbls.	.29½@	.30
Palm Niger, drums	Nominal	
Peanut, refined, drums	.35@	.37
Red Oil, distilled, drums	.27¾@	
Stearic Acid Triple Pressed	.37¼@	
Double Pressed	.34½@	
Tallow, acidless, drums, Chicago	.29@	
Tallow, N. Y. C., extra	.17¾@	
Whale oil, refined	.1232	Nom'l

NORTHWESTERN

Ethyl Formate Amyl Formate
N-Butyl Formate Iso Butyl Formate

Will give you best results when these esters are indicated in your flavor formula.

Be sure to specify our products when ordering these materials.

The NORTHWESTERN CHEMICAL CO.

INCORPORATED 1882 WAUWATOSA, WISCONSIN

PROFESSIONAL SERVICE

FIFTH AVENUE PROTECTIVE ASSOCIATION

142 Lexington Ave. Our Own Building
New York 16, N. Y.

•

41 Years of "RESULT PRODUCING" Service Proves Our Worth. The "TRADES" Recognized CREDIT and COLLECTION AGENCY.

GEORGE W. PEGG Ph. C.
Consultant
Cosmetics—Drugs—Industrial Alcohol—Flavoring Extracts
Labeling—Advertising—Formulas
152 W. 42nd St., N. Y. 18, N. Y. Tel.: Wisconsin 7-3066
Washington address: 2121 Virginia Ave. N.W.,
Washington 7, D.C., c/o Dr. George W. Hoover

FILLING—labeling—packaging service for liquids, powders and pastes. Complete manufacturing plant and warehouse. Send for quotation and prices. We buy and sell surplus chemicals of every description. Interested in bottles, jars and caps in all shapes and styles, large or small lots.

VAN PELL CHEMICAL & SUPPLY CORP.
48 East 1st Street GR. 5-3670 New York City

"Consolidated"

3—World or Ermold Semi-automatic Labeling Machines.
20—Aluminum, Copper, Glass Lined jacketed and agitated Kettles.
1—Colton #3 Toggle Press.
3—Stokes Steam Water Stills, 5, 10, 25 gal. per hour.
2—60 gal. Aluminum Steam jacketed Kettles.
1—80 gal. Aluminum Steam jacketed Kettle.
2—Stokes "R" single punch Tablet Machines, make 2½" dia. tablet.
3—Stokes "F" Single Punch Tablet Machines.
2—J. H. Day 600# Dry Powder Mixers.
7—Copper & Aluminum jack. agit. Vacuum Pans to 1200 gal. cap.
18—Dryers, single & double drum, atmospheric and Vacuum type, All Sizes.
4—150 gallon Stainless Steel Tanks.
52—Rectangular Closed Aluminum Storage Tanks, 650 gal. and 800 gal.
2—24" x 24" plate and frame Filter Presses.
1—Stokes No. 2 gear type Tube Filler.
1—Colton No. 2 worm type Tube Filler.
1—Stokes Tube Closer & Clipper.
1—Colton #3 Tube Closer and Clip Fastener.

Only a partial listing. Send us your inquiries

THE KEY TO SAVING TIME AND MONEY
CONSOLIDATED PRODUCTS COMPANY, INC.
14-15 Park Row, New York, N. Y.
Shops: 335 Doremus Ave., Newark, N. J.
We buy and sell from a Single Item to a Complete Plant

CLASSIFIED ADVERTISEMENTS

Rates, per line, per insertion: Business Opportunities, $1.00; Situations Wanted and Help Wanted, 50c. Please send check with copy.

BUSINESS OPPORTUNITY

SURPLUS WANTED. We WILL BUY: Raw materials, finished products, bottles, jars, caps, machinery, equipment. Entire plants. Write Just Liquidators, Inc., 129 Pearl Street, New York 5, N. Y.

WANTED: 2—Dry Powder Mixers; 2—Pony Mixers; 2—Tablet Machines; 1—Filler; 3—Kettles; 2—Filling Machines. No dealers. Write Box 2353, The American Perfumer and Essential Oil Review.

WANTED:—ONE OR TWO 4-quart or 8-quart standard hand collapsible tube fillers. Box 2683, The American Perfumer.

EVERYTHING UNDER ONE ROOF

Engineering service and consultation; warehouse, machine shops, offices; largest index of available equipment in the country.

Stokes 79D-80A Tube Filler-Closer, in S.S.

32 Colloid Mills and Homogenizers, Eppenbach, Premier, Charlotte and others—in stainless, nickel, bronze, etc.

29 Pulverizers, Mikro, Fitzpatrick, others

40 Dry Powder Mixers, 100 lb. to 4000 lbs.

75 Stainless Steel, Copper, Kettles, jktd.

New Stainless Steel Tanks, all sizes

Stainless Steel Liquid Fillers, Syphon, Gravity, Vacuum.

Semi-Automatic and Fully Automatic Auger Type Powder Fillers

Labellers for Spot or Wrap Around Containers

Packaging and Wrapping Equipment

Tablet Machines: Single Punch and Rotary Models

Evaporators, Stills, Dryers

"FIRST" pays high prices for your used equipment.

FIRST MACHINERY CORP.
157 Hudson Street, New York 13, N. Y.

FOR SALE

6—Mikro Pulverizers, Bantam & ISI, ¾ and 3 HP; 1—Pneumatic Scale, 8-Spout Vacuum Filler with Automatic Single HeadCapper; 2—Alsop Sealed Disc Filter, 8" and 12" Dia.; Kiefer Visco Type Piston Filler; 20-Stokes single and rotary tablet machines, from ½" to 2½"; 10-12" Belt conveyors, 10' to 50'; 9—New 1000 and 2000-lb. powder mixers; 8—New stainless steel kettles, 60 to 500 gal.; 10—New stainless steel tanks, 100 to 2500 gal.; Burt, World, Ermold Labelers; 4—Auger Type powder fillers. Brill Equipment Company, 225 West 34th St., New York 1, N. Y.

COMPLETE FILLING-LABELING-PACKAGING SERVICE. Liquids, powders, creams. Large or small quantities. Also bulk or packaged flavoring extracts. Submit full particulars for quotations. Hindman Products, Inc., Dept. MBD, Morgantown, W. Va.

For Sale: One new uncrated Stokes #90D automatic tube filling, closing and sealing machine. For full description write World's Products Company, Spencer, Indiana.

HELP WANTED

Excellent opportunity for man who has a following in the Drug, Cosmetic and Chemical Line to secure packaging work or contracts for bottle filling and labeling; also tube filling. Very interesting offer. Write Box 2688, American Perfumer, 9 E. 38th St., New York, N. Y.

SITUATION WANTED

YOUNG CHEMICAL ENGINEER—MSc ChE—Majors: Organic chemistry and distillation. Desires position in essential oils or perfume industry. Experience alcohol manufacture and coal tar distillates. Location—immaterial. Married—family. Write Box 2686, American Perfumer, 9 E. 38 St., New York, N. Y.

INDEX TO ADVERTISERS

Advertising Corporation of America.. —
Alrose Chemical Co.....532
Alsop Engineering Corp.....520
American Cholesterol Products, Inc....544
Aromatic Products, Inc.....467
Atlas Powder Co.....461
Avon Allied Products, Inc.....466

Barnett and Sons, Samuel.....548
Bennett, Albert R., Importer.....542
Bopf-Whittam Corp. ..... —
Braun Co., W.....544
Broder, Harry 452
Bush & Co., W. J.....445, 533, 540
Bush Aromatics 548

California Fruit Growers Exchange...448
Carr-Lowrey Glass Co.....458
Chiris Co., Inc., Antoine..Facing page 509
Citrus & Allied Essential Oils Co.....522
Classified Advertisements 546
Consolidated Fruit Jar Co.....542
Consolidated Products Co., Inc.....546
Continental Chemical Co.....540
Cortizas, M., & Co.....503
Cosmetics, Inc. ..... —

Danco, Inc., Gerard J.....541
Dodge & Olcott, Inc.....457
Dow Chemical Co., The
Inside Back Cover
Dreyer, Inc., P. R.....498
Drury & Co., Inc., A. C.....535
du Pont de Nemours & Co., E. I.
Insert between 508-509
Duval, Compagnie (Div. of S. B. Penick & Co.) 469

Enjay Co., Inc..... —

Felton Chemical Co., Inc.....476
Fezandie & Sperrle, Inc.....540
Firmenich & Co.....Back Cover
Fleuroma, Inc. ..... —
Florasynth Laboratories, Inc.....464
French, Inc., Benj.....531
Fritzsche Bros., Inc., Insert between 452-453

General Drug Co.....538
Givaudan-Delawanna, Inc.
Insert between 492-493
Glass Industries, Inc.....465
Goldschmidt Corp., The.....450
Greater New Orleans, Inc.....456
Gunning & Gunning.....537

Helfrich Laboratories, Inc.....447
Herchelroth, Hilary J.....534
Heyden Chemical Corp.....470
Horn, John 542

Innis, Speiden & Company..... —
Interstate Color Co.....539

Katz, Dr. Alexander, & Co.—Essential Aromatics 518
Kelton Cosmetic Co.....534
Kimble Glass Co.....Facing page 492
Koster-Keunen Mfg. Co., Inc.....528
Kraft Foods Co.....453
Kranich Soap Co.....468
Krause, Richard M.....538

Lachman-Novasel Paper Co.....538
Lanaetex Products Sales Co.....535
Lautier Fils, Inc.....528
Leeben Chemical Co., Inc.....503
Leonhard Wax Co., Inc., Theodor.....540
Lueders & Co., George.....446

Magnus, Mabee & Reynard, Inc.....516
Maryland Glass Corp.....514
Merck & Co., Inc..... —
Moutet, Henri J.....512
Murat Co., F..... —

Naugatuck Aromatics 455
New England Collapsible Tube Co.....474
Niel, Jean, Inc..... —
Norda Essential Oil & Chemical Co., Inc. 472
Northwestern Chemical Co., The.....545

Orbis Products 506
Owens-Illinois Glass Co..... —

Parento, Inc., Compagnie.....496
Parsons, M. W.....543
Penick & Co., S. B.....469
Polak & Schwartz, Inc..... —
Powell & Co., Inc., John.....526
Private Label Cosmetic Co..... —

Remus & Co., Inc., Edward.....536
Revson Co., R. F.....540
Richford Corp. 532
Ritchie & Co., W. C.....454
Robert & Co.....529
Robert, Henri L., Inc.....502
Roure, Du Pont, Inc.....Facing page 493

Savon Products Co.....537
Schimmel & Co., Inc.....451
Seeley & Company.....542
Sparhawk Co. 520
Standard Specialty & Tube Co..... —
Stanton Laboratories 530
Summit Chemical Products Corp.....459
Swindell Bros. 460
Synfleur Scientific Laboratories, Inc....510
Syntomatic Corp. 504

Thurston & Braidich.....535
Tombarel Frères 494
Tombarel Products Corp.....494
Turner White Metal Co., Inc.....542

Ungerer & Co.....Inside Front Cover
U. S. Industrial Chemicals, Inc.
Insert between 524-525

van Ameringen-Haebler, Inc.....462, 463
Vanderbilt Co, Inc., R. T.....544
Van Dyk & Co., Inc.....449
Verley and Company, Albert
Insert between 460-461
Voss Corporation, Karl.....536

Whittaker, Clark & Daniels, Inc..... —
Will & Baumer Candle Co., Inc.....522
Wirz, Inc., A. H.....Front Cover

WANTED •

INDUSTRIAL ENTERPRISE

Large financially powerful diversified organization wishes to add another enterprise to present holdings.

CASH PAID

FOR CAPITAL STOCK OR ASSETS

Existing Personnel Normally Retained

Box 1218, 1474 B'way, N. Y. 18, N. Y.

MODERN Cosmetic Laboratory and Factory, under supervision of expert Chemists, available to manufacture your product in Canada. Inquiries invited.

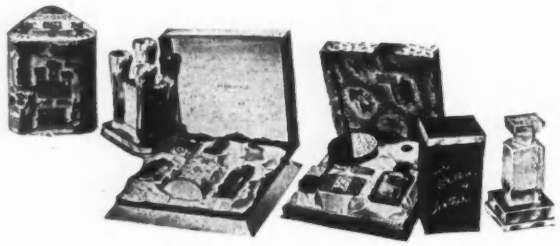
Box 2687, American Perfumer, 9 E. 38th St., N.Y. 16, N.Y.

. . . is a habit with Barnett,

– – Too!

Perhaps because we, too, specialize in packaging we have a great deal of respect for the lowly hen. She manages to do one of the world's best packaging "jobs." Perfect in appearance, perfect in function and on time, every time.

Like the chicken, Barnett is constantly on the job, making delivery as promised, every time, on time. That's one reason Barnett customers are so well satisfied . . . and since WE HAVE *NEVER FAILED* TO MAKE DELIVERY WHEN PROMISED . . . we think we have something to cackle about.



SAMUEL Barnett COMPANY
TURNER & MASCHER STS.
PHILADELPHIA 22, PA.

For Four Generations, Manufacturers of Distinguished Paper Boxes for Distinguished Products

PERFUMERS

BASIC MATERIALS

Burton Bush

BASIC

PERFUME

SPECIALTIES

BUSH AROMATICS

INCORPORATED

136 LIBERTY STREET
NEW YORK CITY

Cable address: ARROBUSH
Telephone: WOrth 2-6557

THE ROMANCE OF

Incenses and Spices

HUGO ZAHND, Ph.D., ROSLYN SAPINKOPF*

THE cinnamon tree, Cinnamomum zeylanicum, a small evergreen tree of the laurel family, possessing scarlet foliage and aromatic bark, is a native of Ceylon.[116] It is cultivated along a strip of land situated at an altitude of about 1500 feet on the southwest side of the island.[117] The tree flowers in May and bears fruit in July. The crop of fragrant bark is gathered during the rainy season, dried by a twenty-four hour period of exposure, and finally relieved of its cortex and epidermis by scraping. The cinnamon quills, which are characterized by being cut obliquely at the bottom, are packed inside one another and then shipped to their point of destination.[118]

True cinnamon bark yields from 0.5 per cent to 1 per cent of a yellow oil, the best variety possessing the delicate fragrance and taste of the bark.[119] The characteristic odor is due to the presence of eugenol and phellandrene. The principal odorous constituent, at least from the quantitative point of view, is cinnamic aldehyde.[120] The valuable cinnamon leaf oil is distilled from the macerated leaves. The leaf oil is of a bright yellow color and has an odor of cinnamon and cloves. It consists largely of eugenol and very small amounts of safrole and benzaldehyde. This oil is frequently employed as a soap perfume. The principal component of the oil derived from the root bark (root bark oil) is camphor.[121] The oil obtained from the flower stalks is mainly composed of eugenol and small amounts of benzoic acid and cinnamic aldehyde.[122]

(This article is continued from the April issue of THE AMERICAN PERFUMER.)

* Brooklyn College, Brooklyn, N. Y.

Several tests have been described for differentiation of true cinnamon from less valuable varieties (cassia, for example). True cinnamon has a more delicate aroma and a higher percentage of cinnamic aldehyde than cassia. Since the starch content of cassia is by far greater than that of cinnamon, the iodine test has been used for the detection of the presence of cassia in true cinnamon. "It is hard to detect cassia in ground cinnamon, as the flour is so similar, but the cassia contains but little wood fiber and few stellate cells and the presence of starch is more marked. Experts are required to test cinnamon. The usual test is by chewing, but this method soon makes the mouth sore."[123] Microscopic examination with polarized light has also served for purposes of identification.[124] Microscopic examination with the aid of filtered ultraviolet light has been used for the differentiation of true cinnamon from cassia.[125] Other methods of differentiation between true and other varieties of cinnamon are depended on the quantitative determinations of ash content, of the water soluble fraction of the ash, of mucilage, and of albuminoids. Still another method for identification is based on the behavior of the product examined when treated with nitric acid: under stated experimental conditions cassia oil yields a green resinous mass, while true cinnamon oil forms an orange, resinous substance (which changes to a cherry-red liquid) and vapors of benzoic aldehyde.[126]

At present cinnamon oils are used in the field of medicine, as a flavoring in aromatic pills or tablets for the perfuming the breath, and in fumigating preparations. The use of cinnamon oils in the field of medicine is particularly

interesting. As mentioned previously, the priests of the ancient Hebrew temples recognized the antiseptic properties of the vapors produced during the burning of various incenses. Monks prescribed the use of cinnamon in cases of fever, contagious diseases, and dysentery.[127] Its use as a stimulant for the vascular and nervous systems was recommended as early as the middle of the nineteenth century. The belief in the antiseptic properties of essential oils and perfumes was particularly prevalent in France. Investigations carried out to establish the scientific evidence for this view led to the conclusion that cinnamon oil was more efficacious in bactericidal action than many other essential oils.[128] It efficacy against such microorganism as are associated with yellow and typhoid fevers was established. The rate of growth of microorganism on a spiced medium has been used as a measure of the preservative value of spices; cinnamon (due to the presence of cinnamic aldehyde) and cloves (due to the presence of eugenol) have been found to rank as the most effective of the substances tested.[129] Cinnamon oil, due to its cinnamic aldehyde content, possesses local antispasmodic and local anaesthetic action. Cinnamon oil is absorbed through normal skin with resultant marked physiological effects.[130] While the oil derived from the leaves of the cinnamon tree has been used as a soap perfume and for medical purposes, little use has been found for the oil obtained from the root bark.

The production of the best grades of cinnamon and cinnamon oils is no longer restricted to Ceylon but extends from the Gold Coast[131] to the Indies and China. Present researches dealing with analytical and synthetic problems will, no doubt, point the way to new and more varied uses for the cinnamon oils.

SAFFRON

Saffron, a deep orange-colored substance, is obtained from the dried stigmas and style of the saffron crocus (Crocus sativus).

Saffron, either as a condiment, a component of incense, a medicine, or a dye has been highly prized by man since antiquity. The ancient Egyptians assigned the symbolic name of "blood of Thoth" to this spice,[132] and evidence of its use by the early Egyptians is found in the Ebers Papyrus. This crocus was evidently cultivated, along with cinnamon, aloes, and frankincense in the garden of King Solomon.[133] Solomon sang to his beloved in similes of saffron (*Canticles* 4:14). Maimonides numbered saffron amongst the components of the holy incense.[134] The great popularity of saffron as a dye was due mainly to its similarity in color to gold; thus it became possible to incorporate the color of the royal metal into raiment worn by the Ancients. Greek virgins wore saffron-hued robes to denote their chastity. As might be expected, saffron was used by the Ancients for medical preparations; Hippocrates prescribed it for the treatment of sore eyes and skin ailments. The Romans valued the spice, particularly, for its aroma. It was used to perfume the baths and homes of the wealthy, and numerous Roman essences and unguents contained the spice as one of the essential ingredients. Lucan, in his "Pharsalia," gives an account of the flowing of blood from the veins of a person who was bitten by a serpent and stresses the similarity between the loss of blood and that of the flow of sweet-smelling essence of saffron from the limbs of a statue.[135] The inhabitants of ancient Rome frequently perfumed the atmosphere of sites of public entertainments by the spraying of aroma-producing preparations. Saffron, in addition to frankincense and myrrh (or other sweet-smelling aromatic woods) was burned upon public and private altars. Vicinius, in Quo Vadis, promises to erect an altar as to a divinity and offer myrrh and aloes, and saffron and appleblossoms. That saffron was an indication of an exalted station in life and a connotation of luxury is shown by the fact that guests at Roman festivals blew the golden powder from each other's hair. In the extravagant fashion typical of his reign, Nero commanded the sprinkling of saffron along the path of his triumphal entry into Rome. The yellow powder was used for the preparation of food because of its rich golden color and owing to its delicate flavor. Horace recommended the sprinkling of saffron over a salad (composed of "sweet olive oil, wine, pickle, and chopped herbs"). While too expensive for wide usage in India, it was employed as a perfume at princely feasts, at marriages of the well-to-do, and for religious ceremonials.

During the Middle Ages, saffron enjoyed great popularity in Spain, France, England, Germany, and Switzerland. The spice was used for more varied purposes than most of the other herbs; thus we find it employed as a flavoring for salads and sauces, as a favorite perfume, as an ingredient of cosmetics, and as a golden-yellow dye. Preparations for the treatment of love-sick persons included saffron as one of the ingredients. The use of the spice by the monks of the Middle Ages is frequently stressed in treaties dealing with monasteries. Saffron pastry was common in England and the product is used for this purpose even at the present time in Cornwall. In addition to madder, indigo and other naturally occurring dyes, saffron was in common use for the dyeing of oriental rugs and garments. In old Ireland the king's mantle and the uniforms of chieftains were saffron-colored; furthermore, the Hebrides of high rank wore shirts of saffron color.[136] Due to its fugitive property and as a result of the production of synthetic aniline dyes, saffron has all but disappeared in its rôle as a dye. Like many other products derived from the plant kingdom, the spice was used for the treatment of various diseases. In accordance with the Doctrine of Signatures, any yellow-juiced plant served as a remedy for jaundice, and, therefore, we find saffron employed for the cure of this malady.

The saffron crocus appears to be indigenous to Greece, Asia Minor, and perhaps Persia; yet, the placing of its site of origin is troublesome, particularly, because its cultivation has been practiced in the East since antiquity. Evidence available indicates that the saffron crocus was cultivated at an early date in India, particularly in Kashmir. Numerous views have been expressed concerning its introduction into China. According to one view, the Mohammedans are given credit for the introduction of the spice into China; another version associates the Mongol invasion with the appearance of this product in the latter country. While in accordance with some authorities the date of introduction of the saffron crocus was about 1300 A.D., Marco Polo claims that China produced ginger, camphor, silk, cotton, salt and saffron at a much earlier date.[137] The spice, it should be noted, mentioned in the Chinese materia medica (1552-78 A.D.). During the Middle Ages saffron was an important product of Arabia and fleets used for its transportation were kept in the Red and Mediterranean Seas. The inhabitants of Arabia, therefore, are given credit

for the introduction of saffron into Spain, where it was grown as early as 961 A.D.[138] Saffron made its appearance in England in the tenth century but seems to have disappeared until it was reintroduced into France and England by the returning crusaders. The cultivation of saffron in Italy was widespread by the time of the fourteenth century and its growth was taken up soon thereafter in Germany and Switzerland. The early growth of the spice in England is associated with the ancient town of Saffron Walden, located in Essex (forty miles from London). The root of the plant, according to one account, was brought to the ancient town during the reign of Edward III (1327-1377 A.D.). The growing of the crocus soon spread to other regions in England and was continued for a period of more than four hundred years.

Some of the greatest literary figures refer to saffron in some of their immortal works. Homer, Hippocrates, Theophrastus, Euripides, Aristophanes, Mochus, Virgil and other famous writers of antiquity mention the crocus. Shakespeare alludes to it in the Winters' Tale (act 4, scene 3: "I must have saffron to color the warden's pies") and, again, in the Comedy of Errors (act 4, scene 4: "Did this companion with the saffron face revel and feast it at my house today?"). It is also mentioned by Milton in his magnificent description of the garden of Eden (Paradise Lost: book 4).

> "Mosaic; under foot the violet,
> Crocus, and hyacinth, with rich inlay
> Broidered the ground, more coloured than with
> stone of costliest emblem."

The crocus is a genus of the Iris family (Iridaceae). Approximately seventy species are recognized, of which the best known are the spring crocus (Crocus vernus), some of the Dutch Hybrides (Crocus maesiacus), and the saffron crocus (Crocus sativus). Their flowers consist of six equal segments, the latter being long, funnel shaped, and gorgeously colored. "The petals" (of the saffron crocus) "are reddish-lilac in colour. Placed centrally in each flower is the style or prolongation of the ovary. At the top of this is a bright red stigma, divided into three parts, with funnel-shaped ends."[139] The successful growing of the crocus requires porous and rich soil, plenty of sunshine, and constant care. The orange-red pollen of the saffron crocus are the source of saffron.[140]

The flowering period of the saffron crocus is very brief and harvesting must be carried out quickly. The whole flowers are collected and the stigmas and the tops of the style are removed by hand and dried by means of charcoal fire.[141] In spite of the gradual increase in the culture of the saffron crocus, saffron continues to be expensive due to the poor yield obtained from a field of bloom. It has been estimated that from seven to eight thousand flowers are required to produce three and one half ounces of dried saffron.[142]

The chemical composition of saffron has not been completely elucidated. The spice appears to contain a volatile oil, a colorless bitter glycoside ("picrocrocine"), and a colored glycoside ("crocine").[143] Saffron oil is a slightly yellow, limpid liquid. It possesses "an intense odour of saffron, which, although exceedingly rich and of a somewhat culinary tone, is comparable to the fatty aldehydes.[144] The oil is slightly levo rotatory and deposits rhombic crystals of stearoptene. Rectification of the oil in vacuo leads to the formation of savitol. The price of the oil is almost prohibitive and the oil is used principally for the preparation of the most expensive oriental type of perfume.[145] Picrocrocine on hydrolysis yields savitol, an uncrystallizable lactonic compound, fructose, and formic acid. Crocine yields crocetine when hydrolized with dilute acids.

The coloring power of saffron is most remarkable; thus, one grain, when ground to a fine powder with a small quantity of sugar imparts a distinctly yellow tint to 700,000 grains of water. The stigma of the flower is particularly rich in the coloring matter.

Several trade varieties of saffron may be purchased. The "hay saffron" or Crocus naturalis (composed of stigmas and styles), the "cut saffron" or Crocus electus (composed of stigmas only), the Spanish product Valencia (possesses a particularly fine aroma), the French saffron Gâtinais (characterized by its powerful odor), "cake saffron" (particularly susceptible to adulteration) are examples of well-known commercial products.

Owing to the valuable character of the spice, adulteration of the product has been practiced for the longest time. During the Middle Ages severe enactments were carried into effect against those who were guilty of adulterating saffron. The keepers of the public warehouses in Pisa, as early as 1305 A.D., were required by oath to arraign the owners of adulterated saffron. In England and France, tampering with saffron was kept in check by means of severe regulations. The punishment for adulterating saffron was most severe in Germany; in some instances, burning or burying alive was the punishment for this crime. Early methods of adulteration included the addition of safflower florets, colored wax, or shreds of meat to the pure product; in other cases the product was adulterated by the addition of an oil or an inorganic salt (such as sodium sulfate) and sugar.[146] More recently, a sample, claimed to be saffron, proved on analysis to consist of blossom of mopordon scanthium L. and barium sulfate. No real saffron was found in the sample which possessed an unnatural color, a disagreeable flavor (due to the presence of mold spores), and a high specific gravity.[147] Other types of adulterants used in recent times include borax, potassium nitrate, sodium sulfate, glycerol, sucrose, and invert sugar.[148]

Today saffron is employed mainly as a flavoring material. While the flavor of the spice is not universally relished, the inhabitants of Central Europe use it extensively for cooking purposes. Limited use is made of it as a coloring agent for food and for the preparation of medicines and perfumes. Bird fanciers add a pinch of saffron to the water of cage-birds in order to improve the color of the feathers (particularly in the case of canaries).

MYRRH

True myrrh, a bitter aromatic gum resin, is obtained from a spiny shrub of the bursera family (Commiphora myrrha) native to Abyssinia and Arabia. Other resins called myrrh are obtained from allied species. The sweet cicely (Myrrhis odorato) of Europe, a fragrant herb of the parsley family, is also known as myrrh.[149]

The myrrh used by the ancient Egyptians, in all likelihood, had its origin in Southern Arabia or Somaliland. Furthermore, according to the Encyclopedia Biblica, the resins and gums of Syria were brought to the markets of Egypt by way of Palestine; the perfumes of Arabia, it is stated, were brought to Jerusalem in the days of Solo-

mon.[150] "The earliest specific reference to commerce in aromatic substances is in 1729 B.C. when the Ishmeelites came from Gilead with their camels bearing spicery, balm, and myrrh."[151] The product was probably derived from several species of Balsamodendra and Commiphora. Myrrh (and dried myrrh) is frequently mentioned in the famous Ebers Papyrus.[152] According to some authorities myrrh was discovered in specimen from mummies, in ancient Egyptian perfumes, and in the contents of an ancient Egyptian medicine chest.[153] Myrrh according to Plutarch and other writers, was used by the Egyptians as an incense (for fumigation or as an offering to their deities) or as an ingredient of numerous perfumes ("kyphi" and "Aegyptum," for example).[154]

For a more detailed record relating to the use of myrrh by the Egyptians consult the previous sections of this paper.*

The Ancients made considerable use of this gum resin in the preparation of medicines. According to ancient Babylonian records, myrrh was numbered amongst the drugs of vegetable origin used by the natives of Babylonia. Myrrh was prescribed as a drug by Hippocrates. The "Holy Bitter," a remedy used for the treatment of numerous diseases (such as vertigo, leprosy, elephantiasis, and epilepsy), contained myrrh. Dioscorides employed myrrh as an ingredient of many of his prescriptions. Numerous unguents ("susinum" and "nardinum," for example) and remedies used by the Romans for the treatment of eye diseases contained this resin.[155] For inflammatory conditions of the throat and tonsils, gargles composed of alum, frankincense, myrrh, and other astringents were employed.[156] The Anglo-Saxons also knew and used myrrh. In the Middle Ages, this resin became associated with the sign of the Zodiac of Leo the Lion and was used for the preparation of a potent agent to insure success in business ventures. "A royal oblation of gold, frankincense, and myrrh is still annually presented by the sovereign on the feast of Epiphany in the Chapel Royal in London, this custom having been in existence certainly as early as the reign of Edward I."[157]

According to Herodotus, Dioscorides, Theophrastus, Pliny, Strabo and other eminent writers, the myrrh-producing tree (Balsamodendron myrrha) flourished in Arabia. It is a low thorny ragged-looking tree, possessing trifoliate leaves. The tree "which produces the myrrh of commerce had a wood and bark which emit a strong odor; the gum which exudes from the bark is at first oily, but becomes hard by exposure to the air."[158] According to Theophrastus, "The myrrh-tree is said to be still smaller in stature (than the frankincense tree) and more bushy; it is said to have a tough stem, which is contorted near the ground, and is stouter than a man's leg; and to have a smooth bark like that of andrachne."[159] ". . . also that the tree which produces myrrh is like terebinth, but rougher and more thorny; that the leaf is somewhat rounder, and that if one chews it, it resembles that of the terebinth in taste; also that of myrrh trees too those that are past their prime give more fragrant myrrh.

"Both trees (myrrh and frankincense), it is said grow in the same region; the soil is clayey and caked, and spring waters are scarce."[160] Theophrastus describes a solid (agglutinated) variety and a liquid (myrrh oil) modification of myrrh.[161]

Oil of myrrh is obtained by distilling heerabol, or medicinal myrrh, the oleo-gum resin which forms on injury to the stem of Commiphora myrrha and perhaps from other species of shrub which are native to North East Africa and Southern Arabia. The product is a rare article of commerce, and varies in its properties and composition in accordance to its origin, age and method of distillation. The oil, extracted from "elect" myrrh of commerce by Tschirch and Bergmann, was viscid in nature and possessed a light yellow color which changed to reddish-brown when exposed to light. It spontaneously resinified and assumed a violet-red hue when acted upon by bromine vapor.[162] Lewinsohn examined four samples of myrrh oil (three different commercial samples and one prepared by himself). Cuminaldehyde was separated from the commercial samples; all the samples yielded eugenol and a small amount of meta cresol. While the older samples yielded free acetic and palmitic acids, the freshly prepared oil contained esters of the same acids. Petroleum ether removed a resin from the old oils; this resin upon reduction formed a hydrocarbon, capable of forming a crystalline addition product with hydrochloric acid, probably identical with cadinene dihydrochloride. Continued fractional vacuum distillation over sodium resulted in the formation of various hydrocarbons of the general formula $C_{10}H_{16}$. Pinene, dipentene, and limonene were identified amongst the products present; a fourth hydrocarbon, possibly belonging to the limonene group was also separated. It was not possible to state positively whether dipentene occurs as such in the oil, or whether it was the product of interaction between pinene and limonene.[163] Friederichs found heerabol myrrh to consist of an ethereal oil, a resin, and a gum. The ethereal oil was viscid, light yellow to greenish in color, aromatic in odor, and bitter in taste. The presence of free formic and acetic acids, as well as the ester of a non-volatile crystalline acid was reported. After saponification a monobasic crystalline acid, myrrholic acid ($C_{17}H_{22}O_5$) was isolated. Meta cresol, cuminic aldehyde, and cinnamic aldehyde were also isolated from the oil. Fractionation over sodium under reduced pressure led to the formation of a new tricyclic sesquiterpene, heerabolene (C_5H_{24}). The resin, under varied experimental conditions, yielded acetic acid, alpha, beta, gamma commiphoric acids (the first two are isomeric and possess the formula $C_{14}H_{18}O_4$ while the third has the formula $C_{17}H_{22}O_5$ and is therefore isomeric with myrrholic acid), commiphorinic acid ($C_{28}H_{36}O_8$), two resin phenols (alpha heerabo-myrrhol, $C_{18}H_{26}O_5$, and beta heerabo-myrrhol, $C_{20}H_{26}O_6$), a monovalent alcohol ($C_{14}H_{22}O_2$), and alpha and beta heerabo-myrrhobolic acids ($C_{15}H_{22}O_7$ and $C_{25}H_{32}O_6$, respectively). The gum reduced Fehling's and ammoniacal nitrate solutions. Oxidation with nitric acid led to the formation of mucic acid and distillation with hydrochloric acid formed furfural due to the presence of galactose, arabinose and xylose; previous to the investigation by Friederichs, Hauers and Tollens had demonstrated the presence of these sugars in the hydrolysate of myrrh gum.[164] More recently, Trost and Doro separated nonacosane ($C_{29}H_{60}$) from Somaliland myrrh.[165]

Bissabol myrrh (perfumed bdellium) derived from Com-

* That the Hebrews used myrrh for the preparation of the Holy Anointing Oil, in the purification of women, and in embalming has been previously mentioned, and a more detailed account is not necessary at this time. The employment of this gum resin by the Magi as a gift to the infant Jesus and its use by the Assyrians (particularly by Antiochus Epiphanes) has also been alluded to. The "vinegar and gall" offered to Christ on the cruss (*Matthew* 27:34) was most likely a mixture of wine and myrrh (The Century Dictionary, Revised and Enlarged Edition. The Century Co., New York, N. Y., 1911, Vol. 6, p. 3923; Zahnd, H. and D. Gillis), "Chemical Knowledge in the New Testament," J. Chem. Educ., 23 pl. 128 (1946).

miphora erythraea may be readily distinguished from true myrrth (heerabol) by its odor and by means of the bromine test; the violet color produced by the action of bromine on Heerabol myrrh is not developed with Bissabol myrrh. Other tests have been suggested for the identification of myrrh; thus, the production of an intense violet or azure color, when treating myrrh with a reagent composed of chloroform, acetic anhydride, and ethylacetate, followed by a small amount of sulfuric acid, forms the basis for a very sensitive reaction for this product.[166]

Today myrrh is used as a fixative in the preparation of certain perfumes and soaps. Its use for the manufacture of dental preparations has been recommended.[167] It has also been employed as a constituent of dental preparations to be used by persons treated with mercurials; the myrrh, it is claimed, prevents the loosening of the teeth which would occur due to the action of the mercury compounds. Myrrh is frequently found in mouthwashes and in medical preparations used for the treatment of respiratory diseases.

STORAX

The term storax has been used to designate two different products. On the one hand, storax (or styrax of the ancient Greeks) indicates a fragrant balsamic resin obtained from the storax tree (Styrax officinale); on the other hand, the expression refers to a balsamic substance, liquid storax, derived from the bark of the oriental Liquidambar (Liquidambar orientale) and also from the American Sweet Gum (L. styraciflua). The source for the resin is indigenous to the Mediterranean region, that for liquid storax (true storax, as the term is understood today) is native to Asia Minor.[168]

While liquid storax is still an article of commerce, the resin, as will be shown presently, was used mainly in ancient times for the preparation of incense and medicinals.

Unfortunately, authors who refer to storax do not always differentiate between the resinous and balsamic forms of storax; consequently, it is not always possible to specify whether resinous or liquid storax was employed by the inhabitants of the more ancient countries. According to Partington, true storax refers to the oriental Liquidambar, although at one time it signified the resinous form (which somewhat resembles benzoin) derived from the Styrax officinale.[169]

The Ancients used the resinous form of storax for ecclesiastical as well as secular purposes. On examination of mummy cases of numerous ancient civilizations, it was found that some were varnished with balsam (perhaps warmed resin storax). "Tschirch and Reutter after examining resins obtained from mummies of the 1000-year period before Christ, concluded that storax, mastic, and Aleppo resin had been used."[170] According to the Eber Papyrus, Nubian storax was used as an incense by the ancient Egyptians.[171] The Hebrews most likely were also acquainted with the resinous form of storax. Stacte, one of the ingredients of the Holy perfume (*Exodus* 30:34), is assumed to be identical with the fragrant gum resin obtained from the bark of the storax tree. The Hebrew word "libneh" occurs twice in the Old Testament; while in both places (*Genesis* 30:37 and *Hosea* 4:13) it is translated as "poplar," the Revised Version of the Bible assumes "libneh" to indicate the storax tree which is the source for the resinous storax. While the ancient Greeks and Romans were acquainted with both forms of storax, it was the resin (which was known for its fragrant odor from the first century A.D. to recent times) which was used mainly for the manufacture of perfumes and incense.[172] The storax mentioned by Pliny and Dioscorides indicates the resinous form.[173] The Mohammedans, in addition to frankincense, benzoin, and coriander seed, used storax for the preparation of incense. Incense was commonly offered at the shrines of saints or was traditionally used to perfume corpses. The Mohammedans also burned incense in their homes, at marriage ceremonies and during their magical rituals.

Storax had its place among the important incenses of astrology. The old magicians took special pain to use the particular odoriferous substance (red storax, for example) appropriate to the planet or constellation under which they hoped to carry out their task. With reference to the days of the Zodiac, red storax was burned between June 21 and July 21 and between February 19 and March 20.[174] Storax was used frequently for the preparation of concoctions employed to drive away evil spirits.[175] An incense used for the strengthening of the memory contained liquid storax in addition to numerous other odoriferous substances.[176]

The source for the resinous form of storax is a flashy shrub covered with an abundance of white flowers. The shrub flourishes in the regions of Carmel, Galilee, Gilead, and Tabor. The resin, which was an important article of Phoenician trade, has a pleasant vanilla-like odor.[177] Liquid storax, as stated previously, is obtained from the bark of Liquidambar orientale. The latter tree is found in the forests of the Southwest of Asia Minor, and the balsamic storax is acquired by heating the outer bark in order to force the valuable balsam into the inner bark. After removing the outer bark, the inner bark is separated and boiled with water, when the balsam is found floating on the top.[178] The crude balsam (liquid storax of commerce) may be separated from the remaining bark and other debris by its solution in alcohol, thus giving rise to "prepared storax."[179]

Chemical analysis of liquid storax revealed the presence of free and combined cinnamic acid, aromatic esters, resin, styrene, vanillin, and water.[180] The odor of the crude product resembles that of naphthalene, but when refined and diluted it has a bouquet similar to that of a mixture of hyacinth, jonquil, and tuberose.[181] The liquid storax found in commerce may vary considerably in composition due to the extraction of odorous components or due to the isolation of cinnamic acid.

Analytical researches dealing with resin storax disclosed the presence of coniferyl alcohol (or some closely related alcohol), d-pimaric acid, abietic acid, cinnamyl, propyl, benzyl and ethyl cinnamates, styrene and vanillin.[182]

Liquid storax has retained its usefulness as a fixative for perfume (especially for handkerchief perfumes such as hawthorn, hyacinth, jonquil, lavender, magnolia, verbena, and tuberose). It is also used in soaps as a fixative of floral scents.[183]

SOURCES AND USE OF SPICES

The following summary gives the sources, the regions in which the latter are found, and the important uses of a number of spices and condiments:

Bay: Source: dried leaves of sweet laurel (Laurus nobolis). Region found in: Mediterranean districts of Europe; Great Britain. Use: flavoring in cooking and pickling.

Calamus root: Source: Calamus or sweet flag, an aro-

matic herb (Acorus calamus) of the arum family. Region found in: cooler parts of the Northern Hemisphere. Use: tonic; flavoring for beverages.

Caraway seeds: Source: Caraway (Carum carvi), an annual or biennial herb of the Parsley family. Region found in: Old world; sparingly naturalized in the United States. Use: aromatic condiment in confectionery and cooking; medicinal preparations.

Cardamon: Source: aromatic, capsular fruit of numerous plants of the Ginger family; the true or official cardamon of commerce is derived from a perennial herb (Elettaria cardamomum). Region found in: Eastern Asia. Use: condiment; medicinal preparations.

Cayenne pepper: Source: dried and ground fruit of a variety of the red pepper (Capsicum frutescene var. longum), also called long pepper. Region found in: developed by cultivation from a shrubby perennial of the nightshade family found in tropical and Southern India. Use: condiment in cookery.

Cloves: Source: dried buds of the clove-tree (Eugenia aromatica), a member of the Myrtle family. Region found in: Molucca Islands; widely cultivated in Asia, Africa, South America, and the West Indies. Use: seasoning for cooking; medicinal preparations (oil of cloves used as an antiseptic, counter-irritant, and toothache remedy).

Coriander: Source: aromatic, seedlike fruits of coriander (Coriandrum sativum), a member of the Parsley family. Region found in: Southern Europe; widely naturalized in the United States. Use: flavoring and seasoning, especially for pastry and confectionery.

Cumin: Source: aromatic seeds of cumin (Cuminum cyminum), a fennel-like plant of the Parsley family. Region found in: Mediterranean region. Use: flavoring.

Dill: Source: leaves and fruits of dill (Anethum graveolens), a herbaceous plant of the Parsley family. Region found in: Europe; naturalized through cultivation in the United States. Use: medicinal preparations; flavoring.

Ginger: Source: rootstock of ginger (Zingiber officinale), a perennial plant of the Ginger family (Zingiberaceae. Region found in: Asia; Pacific Islands; spread by cultivation to most tropical countries. Use: aromatic stimulant; flavoring; confectionery.

Licorice: Source: sweet gummy roots of Glycyrrhiza globra of the genus Glycyrrhiza. Region found in: Mediterranean region; widely cultivated in Europe and Asia. Use: flavoring of tobacco, liquors, and confections; remedy for colds and coughs; to mask the unpleasant taste of medicines.

Mace: Source: dried arillus, or covering, of the nutmeg seed. Region found in: Molucca Islands; cultivated in tropical countries, including Brazil and West Indies. Use: spice.

Marjoram: Source: young shoots and leaves of a number of aromatic plants of the mint family. Region found in: Mediterranean region; cultivated in Eastern North America. Use: condiment.

Mastic: Source: resinous gum from mastic tree or shrub (Pistacia lentiscus) of the cashew family. Region found in: Mediterranean region; grown commercially on the island of Chios. Use: chewing or masticatory in Turkey and Arabia; formerly used for medicinal preparations.

Mint: Source: leaves of members of the Mint family (spearmint, peppermint, for example). Region found in: United States (12 species); England; Continental Europe; Japan. Use: chewing gum; medicinal preparations; fragrant oil for perfumes; mint sauces.

Mustard: Source: seeds of various species of mustard plants belonging to the genus of Brassica. Region found in: black mustard (B. nigra), native to Europe and Asia; Sarepta mustard (B. juncea), native to Southern Asia and naturalized in the United States. Use: condiment; counter-irritant; rubefacient; emetic in poisoning.

Nutmeg: Source: fruit of numerous species of the nutmeg tree (Myristica fragrance); most common nutmeg is Myristica noschata. Region found in: see mace. Use: aril of fruit constitutes source of mace; seed of fruit constitutes source of nutmeg spice and oil of nutmeg.

Parsley: Source: aromatic biennial parsley plant (Petroselinum sativum) of the Parsley family. Region found in: Mediterranean region; thrives in any good soil; now cultivated nearly everywhere. Use: flavoring; garnishing; referred to by Pliny and Dioscorides as a wild medicinal plant.

Pepper: Source: fruit of pepper plant (Piper nigrum) yields common black pepper and also white pepper; for red pepper see Cayenne pepper. Region found in: Forests in the oriental tropics; widely naturalized in West Indies, Philippines, and Java (see Cayenne pepper). Use: condiment in cookery; most important of all spices and second only to salt as a seasoning.

Pimento (Allspice or Jamaica pepper): Source: dried fruit of the aromatic tree Pimento (Pimenta officinale). Region found in: tropical America; cultivated in Central America and the West Indies (especially Jamaica). Use: condiment in cookery; medicinal preparations. Note: The flavor of this spice is similar to that of a mixture of cinnamon, cloves, and nutmeg.

Sage: Source: leaves of a bitterish aromatic perennial herb (Salvia officinale) of the mint family. Region found in: Mediterranean region; widely cultivated in Central Europe, Italy, and France; several sages (S. mellifera and S. apiana, for example) are native to California. Use: flavoring sauces and dressings, especially for meats.

Sarsaparilla: Source: long, fibrous roots of various species of Smilax. Region found in: Mexico; Central America; South America; taken from the New World to Europe as early as the sixteenth century. Use: flavoring; formerly used as medicine (stomach disorders, for example).

Spikenard: Source: (1) rootstocks of an aromatic plant (Nardostachys jatamansi) of the valerian family; (2) root of the American spikenard (Aralia racenosa), a woodland perennial of the aralia family. Region found in: (1) East India; (2) Northern United States; Southern Canada. Use: (1) ingredient of a perfumed ointment of the Ancients; (2) flavoring.

Turmeric: Source: old tubers of a perennial plant (Curcuma longa) of the Ginger family. Region found in: Southern Asia; extensively cultivated in India. Use: condiment (especially in curry powder); medicinal preparations; yellow dyestuff.

Vanilla: Source: Seed pod of a fleshy orchid (Vanilla fragans). Region found in: Grows wild from the borders of the Everglades to Mexico and Central America; cultivated extensively in the West Indies, Java, Ceylon, and other tropical islands. Use: flavoring (vanilla extract).

[116] Poucher, W. A., op. cit., Vol. 1 p. 99.
[117] Ibid., pp. 98-9.
[118] Ibid., p. 99.; Gibbs, W. M., op. cit., p. 101.
[119] Poucher, W. A., op. cit., Vol. 1, p. 99.

[120] **Ibid., p. 100.**
[121] Ibid.: p. 98.
[122] Gibbs, W. M., op. cit., p. 103.
[123] Ibid., p. 100.
[124] Ibid., p. 105.
[125] Leupin, K. and J. Steiner, "Officinal cinnamon bark, oil of cinnamon, and their preparations in filtered ultraviolet light." Mitt. Lebensm. Hyg. *30*, 217-19 (1939).
[126] Gibbs, W. M., op. cit., p. 106.
[127] Aflalo, M., op. cit., p. 484.
[128] Thompson, C. J. S., op. cit., p. 137-8; Mact, D. I., op. cit., p. 64.
[129] Bachmann, F. M., "The Use of Microorganisms to determine the Preservative Value of the different Brands of Spices," J. Ind. Eng. Chem., *10*, pp. 121-3, (1918); Tanner, F. W. and E. Davis, "Some Observations on the Sanitary Condition of Confections," Am. J. Pub. Health, *12*, pp. 605-7 (1922).
[130] Sone, Y. and H. Shero, "Action of some ether-soluble oils on the motor response of the intestine." Tōkoku J. Exp. Med., *30*, pp. 540-5 (1937).
[131] (No authors) "Reports of Recent Investigations at the Imperial Institute —Cinnamon bark from the Gold Coast," Bull. Imp. Inst., *16*, pp. 146-7 (1918).
[132] **Redgrove, H. S., "Spices and Condiments," Pitman and Sons, London. *1933*, p. 143.**
[133] **Verrill, A. H., op. cit., pp. 83-4; Kamm, M. W., "Old-Time Herbs for Northern Gardens," Little, Brown and Co., Boston, Mass. *1938*, p. 235.**
[134] Partington, J. R., op. cit., p: 516.
[135] Rimmel, E., op. cit., p. 108-9.
[136] Kamm, M. W., op. cit., p. 241.
[137] Ibid., p. 258.
[138] Ibid., p. 238.
[139] **Redgrove, H. S., op. cit., pp. 143, 145.**
[140] Kamm, M. W., op. cit., p. 239.
[141] Redgrove, H. S., op. cit., pp. 145-6.
[142] **Ibid., p. 146.**
[143] Ibid., p. 147.
[144] **Poucher, W. A., op. cit., Vol. 1, p. 312.**
[145] **Verrill, A. H., op. cit., p. 277.**
[146] **Redgrove, H. S., op. cit., p. 148.**
[147] **Skarnitzl, E., "Japanese saffron." Z. Nahr. Genuss., Vol. 48, 213-7 (1924).**
[148] **Pierlot, G., "Adulterations of saffron." Ann. fals., 18, 464-8 (1925).**
[149] Suzzallo, H., Editor, "The National Encyclopedia." P. F. Collier and Son Co., New York, N. Y., *1932*, Vol. 7, p. 168.
[150] **Cheyne, T. K. and J. S. Black, op. cit., Vol. 2, p. 2166.**
[151] Poucher, W. A., op. cit., Vol. 2, p. 8.
[152] **Partington, J. R., op. cit., p. 165.**
[153] Ibid., p. 166.
[154] **Partington, J. R., op. cit. p. 167; Poucher, W. A., op. cit., Vol. 2, p. 13; Rimmel, E., op. cit., pp. 19-20.**
[155] **Rimmel, E., op. cit., pp. 108-9; Thompson, C. J. S., "The Mystery and Art of the Apothecary," John Lane The Bodley Head Ltd., London, *1929*, pp. 30-1.**
[156] Thompson, C. J. S., "The Mystery and Art of the Apothecary," op. cit., p. 33.
[157] The Encyclopaedia Britannica, Eleventh Edition, 1910-11, Volume 19, pp. 114-5.
[158] "Smith's Comprehensive Dictionary of the Bible," Ed. by S. W. Barnum, D. Appleton and Co., New York, N. Y., 1884, p. 686.
[159] Theophrastus, "Inquiry Into Plants, and Minor works on odorous and weather Signs," English translation by Sir Arthur Hort, William Heinemann, London, G. P. Putman's Sons, New York, N. Y., *1916*, Vol. 2, Book 9, p 235.
[160] Ibid., p. 259.
[161] Ibid., p. 241.
[162] Finnemore, H., "The Essential Oils," Ernest Benn Limited, London 1926, pp. 490-1.
[163] Lewinsohn, K., "Myrrh Oil," Arch. Pharm., *244*, 412-35 (1906).
[164] Friederichs, O. V., "Chemical Examination of Heerabol Myrrh," Arch. Pharm., *245*, 427-57 (1907); Hauers, R. and B. Tollens, "Ueber die Hydrolyshe Pentosan-hatender Stoffe mittels verdnennter Säuren und mittels Sulfitfluessigkeit, sowie ueber Isolirung von Pentosen," *Ber.*, *36*, 3312 (1903).
[165] Trost, F. and Doro, B. "Separation of nonacosane from Somaliland myrrh," Ann. chim. applicata *25*, 227-9 (1935).
[166] Dezani, S., "Notes on pharmacognostic practice," Giorn. farm. chimica. *73*, 5-12 (1924).
[167] Poucher, W. A., op. cit., Vol. 1, p. 250.
[168] The National Encyclopedia, op. cit., Vol. 9, p. 420.
[169] Partington, J. R., op. cit., pp. 167-8.
[170] Mantell, C. L. and C. W. Kopf, J. L. Curtis, E. M. Rogers, "The Technology of Natural Resins," John Wiley and Sons, Inc., New York, N. Y. *1942*, p. 12.
[171] Partington, J. R., op. cit., pp. 167-8.
[172] Thompson, C. J. S., "Mystery and Lure of Perfumes," op. cit., p. 190.
[173] Atchley, E. G. C. F., "A History of the Use of Incense in Divine Worship," Alcuin Club Collections, XIII, Longmans, Green and Co., New York, N. Y. *1909*, p. 6.
[174] Hayes, C. H., op. cit., pp. 16, 28.
[175] McKenzie, D., "Aromatics and the Soul," W. Heinemann, London, *1923*, pp. 74-5.
[176] Ibid., p. 69.
[177] Cheyne, T. K. and J. S. Black, op. cit., Vol. 4, p. 4813.
[178] Encyclopaedia Britannica, op. cit., 14th Edition, (*1929*), Vol. 17, p. 506.
[179] Finnemore, H., op. cit., p. 351.
[180] Ibid., p. 351.
[181] Verrill, H. A., op. cit., p. 283.
[182] Reinitzer, Fr., "The coniferyl reaction of certain resins," Z. anal. Chem., *69*, 114-21 (1926); Henze, M., "Styrax. I. Detection of coniferous resin acids (abietic and pimaric acids)," Ber. *49*, 1622-32 (1916); Henze, M. "Occurence of resin acids of conniferae in storax," Schweiz. Apoth. Ztg., *57*, 351-4 (1919); Burger, A. M., "Absolute resin oils as new ideal fixatives and perfume bases," Riechstoff Ind. Kosmetik, *12*, 136 (1937).
[183] Verrill, A. H., op. cit., p. 283.

Selected Book List

DDT AND THE INSECT PROBLEM. By James C. Leary, William I. Fishbein & Lawrence C. Salter. Complete facts about the development, application and effectiveness of today's No. 1 insect killer—DDT. Cover both large-scale uses (such as crop protection, animal husbandry, etc.) and small-scale uses (such as elimination of household pests, destruction of garden pests, etc.). 154 pages, illustrated . . . $2.50 postpaid.

SKIN DISEASES, NUTRITION & METABOLISM. By Erich Urbach, with the collaboration of Edward B. LeWinn. First and only book on the subject. Indispensable in the practice of dermatology, internal medicine and allergy. An immense amount of information needed every day by pediatricians, clinical patnologists and workers in the fields of metabolism, nutrition, biochemistry and dietetics. Well documented with photographs and tables. 634 pages . . . $10.00 postpaid.

EMULSION TECHNOLOGY, THEORETICAL & APPLIED. A symposium. Revised 2nd edition. New section on the theory of emulsion compares and discusses all current conceptions in detail; gives clear picture of the viscosity, surface-film, surface-tension, solid particles, adsorption, hydration, oriented-adsorption, oriented-wedge and electro-kinetic theories and of their contribution to the explanation of various phenomena of emulsification. Special feature is list of emulsifying agents divided as follows: Anion Active Agents, Cation Active Agents, Non-Ionic Agents, and Miscellaneous Emulsifiers. This list includes trade names, chemical composition, emulsion type, references, manufacturer and recommended uses. Also contains data on methods of formation of many practical emulsions in the fields of drugs, cosmetics, beverages, foods, polishes, coatings, paints, etc. 360 pages . . . $6.50 postpaid.

HACKH'S CHEMICAL DICTIONARY. 3rd edition, revised and edited by Julius Grant, M. Sc., Ph. D. Standard one-volume reference book on modern chemistry, including the collateral vocabularies of physics, astrophysics, geology, mineralogy, botany, zoology, medicine, pharmacy and the pertinent jargon of industry, mining and commerce. Over 57,000 entries, mostly encyclopedia in character, giving lucid definitions of each subject in light of new research findings, and current acceptions. Numerous original tables of important data, diagrams, portraits, illustrations. Includes latest data on Atomic Disintegration. 925 pages . . . $8.50 postpaid.

DEVELOPING MARKETABLE PRODUCTS AND THEIR PACKAGINGS. By Ben Nash. This book brings you the first organized treatment of the new essential business function which takes the guesswork out of measuring public reception—and assures your product the sales that are expected. It presents the author's well-known "presearch" technique, and considers every aspect of marketing, performance, physical form and production in their relation to the sales appeal of the product. 404 pages . . . $6.00 postpaid.

DRUG & SPECIALTY FORMULAS. By Emil J. Belanger. Tested, modern, practical formulas for human and veterinary remedies; cosmetics; food products; beverages; household, commercial & miscellaneous specialties. A digest of the new Federal Food, Drug & Cosmetic Act; suggestions for labeling drugs included. Little scientific knowledge or equipment needed for most formulas . . . $6.00 postpaid.

PERFUMES, COSMETICS & SOAPS. By Wm. A. Poucher.

Vol. I	(Dictionary of Raw Materials)	$8.00 postpaid
Vol. II	(Production of Perfumes) . .	8.00 "
Vol. III	(Treatise on Cosmetics)	7.00 "

AMERICAN SOAP MAKER'S GUIDE. By P. B. Meerbott & I. V. Stanley Stanislaus. Treatise on art and science of manufacture of soap, candles and allied toilet preparations. Third, completely revised, edition of this exhaustive book—covers all new developments. 700 pages. 105 illustrations . . . $7.50 postpaid.

COSMETICS AND HOW TO MAKE THEM. By Robert Bushby. This simply-written practical guide for beauty specialists, hairdressers and all others who are concerned with the preparation of face powders, vanishing creams, nail polishes, rouges, lipsticks and other cosmetics is a useful handbook for those who have had no previous knowledge of chemistry. The book contains easy to follow formulas and a great many recipes . . . $3.00 postpaid.

For books on perfume and allied industries consult us. Send remittance with your order. Foreign postage extra

ROBBINS PUBLICATIONS BOOK SERVICE

9 East 38th St., New York 16, N. Y.